

A Shared Vision
for Massachusetts
Youth and Young Adults
2008

Summary Data on Youth Development and Health
in Relation to Key Strategic Goals

A joint project of
the Governor's Adolescent Health Council
and
Massachusetts Department of Public Health

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Executive Summary

INTRODUCTION

A Shared Vision for Massachusetts Youth and Young Adults, 2008 updates and replaces the previous iteration published in 2003 and describes our current knowledge about the well-being of Massachusetts youth in the context of current expertise about adolescent health and youth development. *A Shared Vision* is a collaborative effort among two main partners; the Governor's Adolescent Health Council and the Massachusetts Department of Public Health (MDPH). Support was provided by the Executive Office of Health and Human Services - Office of Youth Development. Many other key contributors and agencies offered guidance, assistance in gathering critical data, and input into the report

A Shared Vision uses the **Shared Vision for Massachusetts Youth and Young Adults** framework. This framework, based on the "Five Promises" model advanced by the America's Promise Alliance for Youth, was jointly developed by representatives from the major state agencies concerned with the youth of Massachusetts, with technical support from external state partners knowledgeable about youth and young adults. The Youth Development Advisory Council, the Governor's Adolescent Health Council, the Governor's Juvenile Justice Advisory Council, the Equal Justice Partnership, the Local Officials Human Services Coalition, Department of Public Health and other youth-serving organizations have formally endorsed the framework and vision. (See *Technical Notes* for a discussion of the history of *A Shared Vision*.) The framework offers a broad, affirmative vision for the Commonwealth's youth and includes five strategic goals that are fundamental to achieving this vision.

A SHARED VISION

FOR MASSACHUSETTS YOUTH AND YOUNG ADULTS:

All Massachusetts youth grow up to be healthy, caring and economically self-sufficient adults.

STRATEGIC GOALS

Goal 1: All youth have access to resources that promote optimal physical and mental health.

Goal 2: All youth have nurturing relationships with adults and positive relationships with peers.

Goal 3: All youth have access to safe places for living, learning and working.

Goal 4: All youth have access to educational and economic opportunities.

Goal 5: All youth have access to structured activities and opportunities for community service and civic participation.

OVERVIEW: WHO (AND HOW HEALTHY) ARE OUR YOUTH AND YOUNG ADULTS?

Demographics

There were 1,306,687 youth and young adults aged 10–24 years in Massachusetts in 2006, comprising 20.3% of the Commonwealth's population. Massachusetts is an increasingly ethnically and racially diverse state, and youth population data indicate that this trend will continue.

- The current population of youth aged 10–24 years is 75.7% White, non-Hispanic, 10.8% Hispanic, 7.9% Black, non-Hispanic, 5.3% Asian, and 0.3% American Indian.
- Fifteen percent of all Massachusetts students in grades kindergarten through 12 have a primary language other than English (MDOE, State Profile, 2008). This percentage is expected to continue to rise, following demographic trends.
- In 2007, 9% of high school students either identified themselves as gay, lesbian, or bisexual, and/or reported some same sex behavior. Five percent described themselves as gay, lesbian, or bisexual and 5% reported same sex contact (MYRBS, 2007).
- According to the 2005–06 National Survey of Children with Special Health Care Needs, 16% of children aged 0–17 years in Massachusetts have SHCN compared to 14% in the U.S. The prevalence of SHCN among children increases with age from 10% for children aged less than 5 years, to 18% for those aged 6–11 years and 21% among those aged 12–17 years. Almost 20% of males and 13% of females aged less than 18 years in Massachusetts have SHCN compared to 16% and 12%, nationally. Twenty-four percent of multi-racial, non-Hispanic, 17% of White Non-Hispanic, 15% of Black Non-Hispanic, and 8% of other, non-Hispanic children were reported to have a SHCN (CAHMI, 2008). Youth with disabilities are less likely to participate in physical activity and more likely to be overweight, smoke, use alcohol, and attempt suicide than youth without disabilities.

Snapshot of Massachusetts Health and Wellness Indicators (See Goal sections for more)

- In 2005–2006, Massachusetts was ranked the 3rd best state in a composite measure of child well-being, based on ten key indicators of child health, education, poverty, and family demographics.
- Massachusetts has one of the highest rates of health insurance coverage for youth in the nation, with only 3.1% of youth aged 13–18 years uninsured in 2006.
- Massachusetts has the 3rd lowest teen birth rate in the nation.
- Overweight and obesity are increasing, while access to physical education is declining.
- Massachusetts youth are less likely to smoke tobacco, but more likely to use marijuana and to binge drink than their peers across the nation.
- Seat belt use is improving, but Massachusetts youth are less likely to use seat belts than their peers nationally.
- Injuries account for nearly three quarters (72%) of all deaths among youth aged 15–24 years.
- The proportion of high school students postponing sexual intercourse has increased slightly since 1993, as has condom use for those who have ever had sex. However, 17% of 9th graders and 51% of high school seniors have had sex within the past 3 months.

- Ability to talk to parents about important life issues, plans for higher education, and participation in volunteer work or community service are increasing.

GOAL 1: ALL YOUTH HAVE ACCESS TO RESOURCES THAT PROMOTE OPTIMAL PHYSICAL AND MENTAL HEALTH

- Massachusetts has one of the highest rates of health insurance coverage for youth in the nation. The percent of uninsured children and youth aged 0–18 years decreased from 3.2% in 2004 to 2.5% in 2006. The uninsured rate for youth aged 13–18 years decreased from 4.7% in 2004 to 3.1% in 2006 (MA Division of Health Care Finance and Policy, 2006).
- Hispanic children and youth aged 0–18 years were more likely to be uninsured (5.0%) than their White, non-Hispanic (1.5%) and other, non-Hispanic (2.4%) counterparts (MA Division of Health Care Finance and Policy, 2006).
- The percentage of high school students reporting that they participated in physical education classes on one or more days during an average school week, declined substantially, from 80% in 1995 to 61% in 2007 (MYRBS, 2007).
- Among high school students, physical activity declined with grade level. Ninth grade students were more likely than twelfth grade students to report 60 minutes or more of physical activity per day for five or more days in past week (49% vs. 36%) and playing on one or more sports teams in the past year (70% vs. 53%) (MYRBS, 2007).
- During the 2005–2006 school year, 210,516 Massachusetts high school students competed in sports. This number represents the total number of competitors; if one student participated in more than one sport, s/he is counted multiple times (National Federation of State High School Associations, 2006).
- Only 54% of Massachusetts young adults aged 18–24 years with a disability participated in regular physical activity, compared to 61% of young adults without a disability (MBRFSS, 2003–2005).
- Middle school males were more likely than females to report a higher frequency (3 days or more a week) of vigorous physical activity (75% vs. 70%; MYHS, 2004). However, middle school males were also more likely (26% vs. 19%) than females to report no moderate physical activity (MYHS, 2004).
- Eleven percent of high school and middle school students in Massachusetts were overweight ($\geq 95^{\text{th}}$ percentile), which is more than double the Healthy People 2010 benchmark. An additional 18% of middle school students and 15% of high school students were at risk for overweight (85^{th} to $<95^{\text{th}}$ percentile) (MYHS, 2007; MYRBS, 2007).
- Nearly half (46%) of Massachusetts high school students in 2007 were currently trying to lose weight. Females were more likely to report they were trying to lose weight compared to males (63% vs. 29%) (MYRBS, 2007).
- More than one in four (26%) young adults with disabilities aged 18–24 years was obese ($\text{BMI} \geq 30$) compared to 16% of their non-disabled counterparts. Forty-seven percent of disabled young adults were overweight ($\text{BMI} 25\text{--}<30$) compared with 38% of their non-disabled counterparts (MBRFSS, 2004–06).

- High levels of sedentary behavior can contribute to excessive weight gain. Twenty-eight percent of high school students watched three or more hours of television on school days. Over half of high school students who identified as Black, non-Hispanic (55%) and 43% of those who identified as Hispanic reported watching 3+ hours of television on school days compared with 27% of Asian and 23% of White, non-Hispanic students (MYRBS, 2007).
- Only 15% of Massachusetts high school students and 25% of young adults aged 18–24 years consumed the recommended intake of five fruits and vegetables per day (MYRBS, 2007; MBRFSS, 2005). In fact, among Massachusetts high school students intake of five fruits and vegetables per day has decreased from 17% in 1999 to 15% in 2007 (MYRBS, 2007). Among middle school students, 28% of males and 24% of females reported eating no vegetables the day before survey administration (MYHS, 2007).
- Today 101,000 children from low-income families receive school breakfast, a seven percent increase over the past five years (Rosso, 2005). In low-income communities, 68% of elementary school-aged children participated in the School Breakfast Program (Massachusetts Hunger Assessment II, 2006). There are 241 middle and high schools across Massachusetts where more than 40% of the students qualify for the federal free lunch program. To qualify, students must live in households at or below 130% of the federal poverty level (MDOE, School Lunch Program Data, 2006).
- In 2007, 18% of high school students were current cigarette smokers, somewhat less than the national average of 23% (MYRBS, 2007).
- In 2007, 24% of young adults aged 18-24 years were current smokers, the same as the national prevalence (MBRFSS, 2007). Among adults in Massachusetts, young adults have the highest rate of smoking of any age group.
- In communities with boards of health funded by the MTCP, the illegal tobacco sales rate was 14% in 2006. For communities with no funded board of health, the illegal sales rate was 29% in 2006 (MDPH, MTCP, 2006).
- More than one in four (28%) high school students engaged in at least one episode of binge drinking in 2007, higher than the national average (MYRBS 2007).
- After remaining steady from 1995 to 2001, the rates of binge drinking decreased in 2003 and have remained relatively stable over the past few years (MYRBS, 1995–2007).
- The rates of lifetime and recent alcohol use among youth with disabilities are substantially higher than their peers without disabilities. In 2007, 38% of middle school youth with disabilities reported having ever drunk alcohol (other than a few sips) and 20% reported recent use compared to 20% and 8% of their non-disabled counterparts.
- In 2007, one out of four (25%) high school students in Massachusetts used marijuana in the past 30 days, higher than the U.S. average of 20%. However, after remaining level from 1995 to 2001, both current and lifetime marijuana use declined from 2003–2007.
- In 2007, the majority (56%) of Massachusetts high school students reported never having had sexual intercourse. This represents a slight increase from 51% in 1993 (MYRBS, 2007).
- The proportion of students who are currently (within past three months) sexually active increases with grade level from 17% of 9th grade students to 51% of 12th grade students.

- Thirty-eight percent of Hispanic students and 36% of Black students are sexually active versus 31% of White students and 26% of Asian students.
- Among youth reporting sexual intercourse in the past 3 months, 61% used a condom at last sexual intercourse, an increase from 52% in 1993 (MYRBS, 1993, 2007).
- In 2006, the teen birth rate in Massachusetts was 21.3, almost 50% lower than the projected national estimate (MDPH, 2008; CDC, NVSS, 2007). Massachusetts has the 3rd lowest teen birth rate in the U.S. (National Campaign to Prevent Teen Pregnancy, 2007).
- Among youth aged 15–24 years, when compared to Whites, the rate of reported chlamydia infection was 15 times higher in Blacks and 10 times higher in Hispanics (MDPH, BCDC).
- As of December 31, 2005, there were 402 youth aged 13–24 years known to be living with HIV/AIDS in Massachusetts (MDPH, HIV/AIDS Surveillance Program, 2007).
- Ten percent (1,504) of all persons living with HIV/AIDS were diagnosed with HIV infection when they were aged 13–24 years, and 2% were diagnosed prior to age 13 years. Most of those are now teens or young adults (MDPH HIV/AIDS Bureau, 2007).
- From 2004–2006, the suicide rate for youth aged 15–24 years was 5.5 per 100,000 residents in the age group, substantially lower than the national average of 10.0 for this age group.
- From 1997 to 2007 there has been a significant decrease in the percentage of high school students who reported that they seriously considered a suicide attempt; 20% and 32% in 1997 vs. 9% and 16% in 2007 for males and females, respectively (MYRBS, 2007).
- Youth who identified as gay, lesbian or bisexual, or who reported any lifetime same-sex sexual contact had suicidality rates substantially higher than those of their peers. In 2007, 24% of these students reported a past-year suicide attempt, compared to 6% of other students, and 36% reported seriously considering suicide, compared with 10% of other students (MYRBS, 2007).

GOAL 2: ALL YOUTH HAVE NURTURING RELATIONSHIPS WITH ADULTS AND POSITIVE PEERS

- In 2007, more than four-fifths of Massachusetts high school students (84%) felt that they could talk to a parent or other adult in their family about things that are important to them (85% of White, 81% of Black, 81% of Asian, and 79% of Hispanic/Latino students) (MYRBS, 2007). This has improved from 76% in 2001 (MYRBS, 2001).
- Among youth aged 15–19 years in households, 65% live with two married parents, 26% live with a single female head of household, 7% live with a single male head of household, and 3% live in non-family households. The percentage of youth living in households with two married parents varies by race/ethnicity: 72% among White, non-Hispanic youth compared with 37% among Black, non-Hispanics and Hispanics (U.S. Census Bureau, American Community Survey, 2006).
- Approximately 17,000 Massachusetts youth aged 10–18 years were involved in formal mentoring relationships in 2006 (Mass Mentoring Partnership, personal communication, 2007).

- Eleven percent of all high school students reported experiencing violence in a dating relationship. A greater proportion of female students reported having been physically or sexually hurt by a date than did male students (15% female, 7% male) (MYRBS, 2007).

GOAL 3: ALL YOUTH HAVE SAFE PLACES FOR LIVING, LEARNING AND WORKING

- Death is fortunately a rare event among youth aged 10–14 years. Massachusetts youth have lower death rates in every age group than do youth nationally. However, while still infrequent, injuries account for nearly three quarters (72%) of all deaths among youth aged 15–24 years.
- The leading causes of death from injury among youth and young adults aged 15–24 years are motor vehicle crashes and other unintentional injuries, suicide, homicide, and deaths of undetermined intent.
- Alcohol is a major contributing factor to motor vehicle crashes for youth. In 2005, 28% of drivers aged 16–24 years who were involved in a fatal motor vehicle crash had a blood alcohol concentration of .01 or above. (Note: These figures are based on a total of 79 *driver* deaths that occurred in Massachusetts, which may include out-of-state residents).
- Unfortunately, Massachusetts youth are less likely than their peers nationally to report using a seat belt. Fifteen percent of MA high school students reported rarely or never using a seat belt compared to 10% of youth nationally. However, there has been significant improvement in seat belt use since 1997, when 29% of high school students reported they rarely or never used a seat belt (MYRBS, 2007).
- In 2006, 79% of Massachusetts young adults aged 18–24 years reported wearing a seatbelt in the past month, compared to 88% of adults aged 18–24 years nationally. (MBRFSS, 2006).
- Twenty-one percent of male students and 22% of female students reported being bullied at school in the 12 months before the survey. Also, 21% of students reported that at some time in the past 12 months their property had been stolen or deliberately damaged at school (MYRBS, 2007).
- Students who identified themselves as gay, lesbian, or bisexual or who reported same-sex sexual contact had negative experiences related to personal safety significantly more frequently than other students. These youth reported significantly higher rates of weapon carrying, physical fighting, gang involvement, skipping school because of feeling unsafe, being bullied, being threatened or injured with a weapon at school, experiencing dating violence, and experiencing unwanted sexual contact (MYRBS, 2007).
- While the Massachusetts homicide rate in every youth age group is lower than the national average, the homicide rate for youth aged 15–24 years in Massachusetts increased 71% between 2000 and 2005.

- Youth aged 15-24 years have the highest rates of Emergency Department visits for violent gun and sharp instrument related injury compared to all other age groups.
- Over time, the juvenile arrest rate for serious crimes has decreased significantly in both the United State and in Massachusetts. From 1995 to 2005, the Part I juvenile arrest rate in Massachusetts has decreased by 52% and in the United States by 50%.
- In 2005, there were 33,396 delinquency complaints issued by the Juvenile Court (Administrative Office of the Trial Court, 2004). The number of delinquency complaints in 2005 was lower than during any time in at least the past 16 years and is 31% lower than the high in 1996. The 33,396 complaints in 2005 involved 13,804 juveniles in the Juvenile Court plus a much smaller number of juveniles in the District Courts (2005).
- In 2005–2006, 17% of women aged 18–24 years report having ever experienced sexual violence. Among all women, respondents who reported a disability were twice as likely to report having experienced sexual violence (having sexual parts of the body touched without consent or attempted or completed penetration without consent) as those who did not report a disability (MBRFSS, 2005–2006).
- The Massachusetts Department of Elementary and Secondary Education (DESE) included a housing question on the past two administrations of the YRBS. In 2007, 5% of Massachusetts high school students fit the definition of homelessness (see Technical notes for definition of homelessness based on MYRBS). Homeless students were significantly more likely than their housed peers to experience all forms of violence and victimization and to report high levels of alcohol and drug use (MYRBS, 2007).
- The prevalence of childhood asthma increases with age. Twenty-one percent of middle school students and 23% of high school students reported having been told by a doctor or other health care professional that they have asthma (MYHS, 2007).
- In 2005, 37% of Massachusetts youth aged 16–17 years (nearly, 72,000) were employed at any given point compared to 27% of youth aged 16–17 years nationwide (U.S. Bureau of Labor Statistics, 2005). These statistics do not include the many youth aged 14–15 years who also work.
- During 2002–2004, there were 3,012 Emergency Department visits for work-related injuries by Massachusetts teens aged <18 years - an average of 1,004 injury-related visits per year.

GOAL 4: ALL YOUTH HAVE ACCESS TO EDUCATIONAL AND ECONOMIC OPPORTUNITY

- Massachusetts' fourth and eight graders have been 1st or tied 1st on all 4 examinations of the National Assessment of Educational Progress since 2005. (Ready for 21st Century Success: Patrick Administration Education Action Plan June 2008).
- The percentage of the class of 2007 who graduated in 4 years was 80.9% overall, but 65.2% for low income youth. While 86.4% of White and 83.7% of Asian graduated in 4 years, only 65.2% of African Americans and 58.5% of Latinos achieved that goal (Cohort 2007 4-Year Graduation Rates: State Results. MA DESE).
- Using annual grade-specific dropout data, the DESE projects the cumulative dropout rate over the four-year high school period for each graduating class. For the class of 2009, the

projected four-year dropout rate is 12.8%, slightly lower than the projected rates of 13–15% for the classes of 2006–2008.

- For the Class of 2006, 78% of Massachusetts high school graduates plan to continue their education at a two- or four-year college, up from 53% in 1981.

GOAL 5: ALL YOUTH HAVE ACCESS TO STRUCTURED ACTIVITIES AND OPPORTUNITY FOR COMMUNITY SERVICE AND CIVIC PARTICIPATION.

- In 2007, more than half (52%) of Massachusetts high school students reported having taken part in after-school or weekend activities during the previous week, such as school clubs, music, art or drama lessons, activities at religious or other faith-based organizations, or other supervised activities. Participation was more common among female than male students (57% vs. 47%), and was highest among Black students (58%) compared to Asian (55%), White (53%) and Hispanic students (39%).
- Twelfth graders (56%) were more likely to take part in after-school or weekend activities than 9th graders (50%) (MYRBS, 2007).
- In 2007, 45% of Massachusetts high school students reported having spent at least one hour in the past month doing volunteer work or community service. Participation was more common among female than male students (50% vs. 41%), and was highest among Asian students (51%) compared with White, non-Hispanic (48%), Black, non-Hispanic (40%) and Hispanic students (37%).
- More twelfth graders (53%) reported engaging in volunteer work or community services than students in other grades with 9th graders reporting 41%, 10th graders 45%, and 11th graders 44% (MYRBS, 2007).

SUMMARY AND NEXT STEPS

Massachusetts youth and young adults are doing well on some diverse, key benchmarks of overall health and well being. Yet even within these successes, there continue to be youth who are falling behind; youth who continue to engage in risky behaviors, are not receiving basic health care services, or are not attaining the educational levels of their peers. In other key benchmarks, large numbers of Massachusetts youth continue to face challenges, including engaging in risky behaviors that can have serious health consequences, as well as substantial personal and monetary costs.

Youth and young adults benefit from quality schools, supportive parents and caring adults, community resources, and opportunities to make contributions. Future steps to make a difference in the lives of youth and young adults include:

- Ongoing monitoring of data and outcome indicators annually, creating a Massachusetts “report card” of youth and young adults health, to detect trends in the health of Massachusetts youth and young adults. This report should be available at the state and community level to chart our successes and identify challenges.
- Identification and support of best practices in families, communities, agencies and policies that lead to healthy Massachusetts youth and young adults.

- Collection of new data and indicators that will better elucidate assets of youth and young adults, families and communities such as numbers of youth and young adults with caring schools, high academic standards, and low drop-out rates.
- Commitment to collection of data on youth and young adults with disabilities and addressing unmet needs.
- Funding and encouragement of health promotion, prevention and intervention programs that involve youth and young adults in planning and implementation, and that build upon successes in Massachusetts and other states.
- Coordination of services for youth and young adults with access to physical and mental health services, good schools, safe and caring communities, employment, and opportunities for community participation and service.
- Commitment to eliminating health disparities in Massachusetts youth and young adults and ensuring that the gains and progress made in the lives of our most vulnerable youth and young adults are reinforced.
- Focus on a youth development model, viewing youth as resources to be developed and not problems to be solved.
- Commitment to investing in youth and young adults as the next generation of Massachusetts citizens.
- Development and use of indicators that will detect trends in important health indicators from birth to five through youth and the young adult years, providing a more complete picture of child and youth outcomes to enable better support to Massachusetts children, youth, and families.
- Case management that is client-centered to assure the best possible services to youth and young adults.
- Use of technology to provide coordinated services, one-stop shopping and data by community and sub-population.

Acknowledgements

Many people have contributed to the work of *A Shared Vision* over several years. *A Shared Vision* is a collaborative effort between two main partners, the Massachusetts Governor's Adolescent Health Council and the Massachusetts Department of Public Health. Support was provided by the Executive Office of Health and Human Services, Office of Youth Development. For a full list of report contributors, please see Appendix C.

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In 2008, the legislature changed the name of the MA Department of Education – acronym DOE – to the Department of Elementary and Secondary Education – acronym DESE. This report uses the new name DESE.

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Introduction

OVERVIEW

A Shared Vision for Massachusetts Youth and Young Adults, 2008 updates and replaces the previous iteration published in 2003. Here we describe our current knowledge about the well being of Massachusetts youth using the most current expertise on adolescent health and youth development. *A Shared Vision* is a collaborative effort between two main partners, the Governor's Adolescent Health Council and the Massachusetts Department of Public Health, abbreviation MDPH. Support was provided by the Executive Office of Health and Human Services - Office of Youth Development. Many other key contributors offered guidance, assistance with data, and input into the report.

Data for this document come from a variety of data sources from multiple state agencies that serve youth. While statutory, regulatory and fiscal limitations often impede collaboration among public agencies, there was broad agreement among participants that efforts to develop a comprehensive picture of youth status and to improve coordinated efforts at the programmatic level are necessary to effectively address challenges facing the Commonwealth's young people.

A Shared Vision uses the **Shared Vision for Massachusetts Youth and Young Adults** framework. This framework, based on the "Five Promises" model advanced by the America's Promise Alliance for Youth, was jointly developed by representatives from the major state agencies concerned with the youth of Massachusetts¹ with technical support from external state partners knowledgeable about youth and young adults.² The Youth Development Advisory Council, the Governor's Adolescent Health Council, the Governor's Juvenile Justice Advisory Council, the Equal Justice Partnership, the Local Officials Human Services Coalition, and the Department of Public Health have all formally endorsed the framework and vision. See *Technical Notes* for a fuller discussion of the history of *A Shared Vision*.

The framework offers a broad, affirmative vision for the Commonwealth's youth and includes five strategic goals that are fundamental to achieving this vision.

¹ Participants in the development of the *Shared Vision* framework included representatives of the Executive Office of Health and Human Services, Office of Youth Development, the Executive Office of Public Safety, the Department of Elementary and Secondary Education, the Department of Labor and Workforce Development, the Department of Public Health and the Department of Social Services.

² Technical support was provided by the Massachusetts Governor's Adolescent Health Council.

*A SHARED VISION
FOR MASSACHUSETTS YOUTH AND YOUNG ADULTS*

**All Massachusetts youth grow up to be healthy, caring and
economically self sufficient adults.**

STRATEGIC GOALS

- Goal 1.** All youth have access to resources that promote optimal physical and mental health.
Goal 2. All youth have nurturing relationships with adults and positive relationships with peers.
Goal 3. All youth have access to safe places for living, learning and working.
Goal 4. All youth have access to educational and economic opportunity.
Goal 5. All youth have access to structured activities and opportunities for community service and civic participation.

The five strategic goals of the Shared Vision framework are based on the most current national knowledge about youth development. The goals are a modification of the “Five Promises” model which are caring adults, safe places, a healthy start, effective education, and opportunities to help others, as developed by the America’s Promise Alliance for Youth. *A Shared Vision* synthesizes the available data on youth and young adults in Massachusetts under these five strategic goals.

Whenever possible, each goal has an accompanying set of indicators that are measured against national indicators of youth well being. Unfortunately, much of these data focus on what is *wrong* with our youth and young adults. *A Shared Vision*, however, utilizes a holistic, “whole child” youth development framework that looks at the strengths and challenges in the lives of our young people.

Massachusetts is one of the best states in the nation in which to raise, and to be, a youth or young adult. According to several key indicators, youth and young adults in Massachusetts are healthier, more financially secure, and better educated than their peers in many states.

However, not all youth have benefited equally. Disparities among communities, and particularly among racial and ethnic groups, point to the need for intensive initiatives to support adolescents who are at risk as determined by indicators of healthy development.

Definitions

1. *Youth.* Youth in *A Shared Vision* are defined as persons aged 10 to 18 years. *Please note* that throughout the report, the term “youth” is sometimes used to indicate youth and young adults more broadly, such as the term “youth development.”

2. *Young Adult.* Young adults in *A Shared Vision* are defined as persons aged 19 to 24 years.

Wherever possible we report data on both youth and young adults.

The youth and young adults of Massachusetts represent the future of our Commonwealth. They are tomorrow's parents, leaders, and workers. To ensure that our young people grow up to be productive, well educated, healthy adults, each of the five Shared Vision goals must be achieved. It is important to focus on all areas in youths' and young adults' lives in order for them to become fully prepared adults.

"Problem free does not mean fully prepared" – Karen Pittman; Executive Director, The Forum for Youth Development, 1991.

A SHARED VISION'S PURPOSE

1. To provide policymakers, community leaders, and the public with a comprehensive view of youth and young adults in the Commonwealth.
2. To identify areas where data are lacking and measures are needed to improve our understanding of Massachusetts youth and young adults. Asset based data are lacking. In the past, most data collected on youth and young adults has been deficit focused,³ but this process is slowly changing to include positive elements in the lives of youth and young adults.

Asset based Approach

This approach sees youth and young adults as resources and agents of change. Furthermore, it identifies assets and resiliency factors needed by youth to achieve healthy adulthood, and sets the goals as "building assets" rather than "reducing risks."

DATA USED IN A SHARED VISION

A Shared Vision seeks to set an agenda for collecting not only indicators of needs, but also more asset based positive data about Massachusetts youth and young adults. Therefore, issues in *A Shared Vision* are not included on the basis of data availability, but rather, on the importance of the indicator. Many times this means there are no national data to compare to Massachusetts. Further, there may not be Massachusetts data available at this time. It is hoped that the inclusion of certain questions in the report will promote improved indicators and further research efforts in the state.

A list of *Unmet Data Needs* can be found in *Appendix A*. This list identifies indicators for which data are not currently collected but which would enhance our understanding of the factors influencing youth development within the five strategic goals. Many of these indicators are assets, unlike much of the data presented in *A Shared Vision*, which focus on deficits. These indicators would provide a more comprehensive picture of what it is like to be a youth or young adult in Massachusetts.

A Shared Vision includes the twenty one critical health objectives for adolescents from *Healthy People 2010*. These are important objectives to analyze within Massachusetts in order to see how the state compares nationally. Major data sources include the Massachusetts Youth Risk Behavior Survey, abbreviation MYRBS, the Massachusetts Youth Health Survey, abbreviation

³ See Glossary for definition.

MYHS, and the Massachusetts Behavioral Risk Factor Surveillance System, abbreviation MBRFSS. Other data sources include the Massachusetts Community Health Information Profile – acronym MassCHIP – the Annie E. Casey Foundation, and the U.S. Census. See *Technical Notes* for more information about each data source.

DATA LIMITATIONS

A Shared Vision fuses state of the art public health – *Healthy People 2010*, 21 critical objectives for adolescents – and public policy youth development – Shared Vision for Massachusetts Youth, 2003 – models. While obtaining reliable data for the “traditional” health indicators is difficult, data are often non existent for positive measures of youth and young adult health and well being.

Some of the difficulties encountered in preparation of *A Shared Vision* included,

1. Inconsistencies in age ranges and differences in the years for which the most recent data were available from various data sources
2. Differences in the availability of some measures by community
3. Lack of state level estimates for many measures
4. Delays in data availability after collection
5. Lack of representation of youth in private schools or out of school youth in the Youth Risk Behavior Surveillance System and the Youth Health Survey.

A Shared Vision is not intended, in its current form, to be all inclusive or “finished” but rather a work in progress. *A Shared Vision* includes the “best data available” in an ambitious attempt to provide as comprehensive a picture of youth and young adults in Massachusetts as possible.

A SHARED VISION IN RELATION TO OTHER EFFORTS

A Shared Vision is related to several other data collection and information systems in Massachusetts. See *Technical Notes* for more information.

THE YOUTH DEVELOPMENT APPROACH

A Shared Vision takes a comprehensive, holistic “whole child” approach to the lives of youth and young adults that includes their physical and mental health, education and skills development, and civic participation. This approach is based on the process of youth development.

Youth Development is the ongoing process in which all young people are engaged and invested. Through youth development, young people attempt to meet their basic personal and social needs and to build competencies necessary for successful youth and adult life. It is an approach, framework, a way to think about young people that focuses on their capacities, strengths, and developmental needs and not on their weaknesses and problems. All young people have basic needs that are critical to survival and healthy development. They include a sense of safety and structure; belonging and membership; self-worth and an ability to contribute; independence and control over one's life; closeness and several good relationships; and competency and mastery. At the same time, to succeed as adults, all youth must acquire positive attitudes and appropriate behaviors and

skills in five areas: health (personal/social); knowledge; reasoning and creativity; vocation; and citizenship. – Politz, 1996

1. The youth development approach is youth centered.
 - a. The focus is on young people as resources.
 - b. Youth have the capacity to contribute to their own and others' learning and development.
2. The youth development approach is founded on meaningful youth participation in ways that impact their development.
 - a. Youth are engaged at multiple levels of programs, agencies and communities.
 - b. Adults are trained to work with youth in meaningful ways.
 - c. Youth should be provided avenues for participation, such as making decisions and contributions, employment, and taking on challenging responsibilities.
3. The youth development approach is asset based, versus deficit focused.
 - a. The approach to working with youth is focused on building strengths and capacities, versus identifying and eliminating deficits and problems.
 - b. Assets are the strengths, or positive building blocks, that all youth need to succeed.
4. The youth development approach focuses on positive youth outcomes.
 - a. This approach strives for a world where youth are fully prepared to live their lives presently and become fully prepared adults, versus living problem free.
 - b. Youth fully develop social skills, civic and cultural competencies, positive attitudes toward community and a strong sense of identity.
 - c. Youth development programs seek to attain program outcomes as well as positive youth outcomes.
5. The youth development approach emphasizes and values caring relationships between youth and adults as a key mechanism for building success in youth and communities.
 - a. Ongoing caring relationships provide supports for young people.
 - b. Caring relationships provide guidance, high expectations, and affirmation.
6. The youth development approach involves the whole community.
 - a. Youth participation and programming are essential elements of healthy communities.
 - b. Healthy communities offer places for young people to go, where they can learn and contribute.
 - c. Youth development professionals are specifically trained to implement the youth development approach.
 - d. Community members participate in the youth development approach as role models and as resources both active and passive for developing youth.

(Community Matters)

Overview. Who are the Youth and Young Adults in Massachusetts?

DEMOGRAPHICS

- There were 1,306,687 youth and young adults aged 10–24 years in Massachusetts in 2006, comprising 20.3% of the Commonwealth’s population, slightly lower than the proportion of youth among the population nationally (Table O-1).

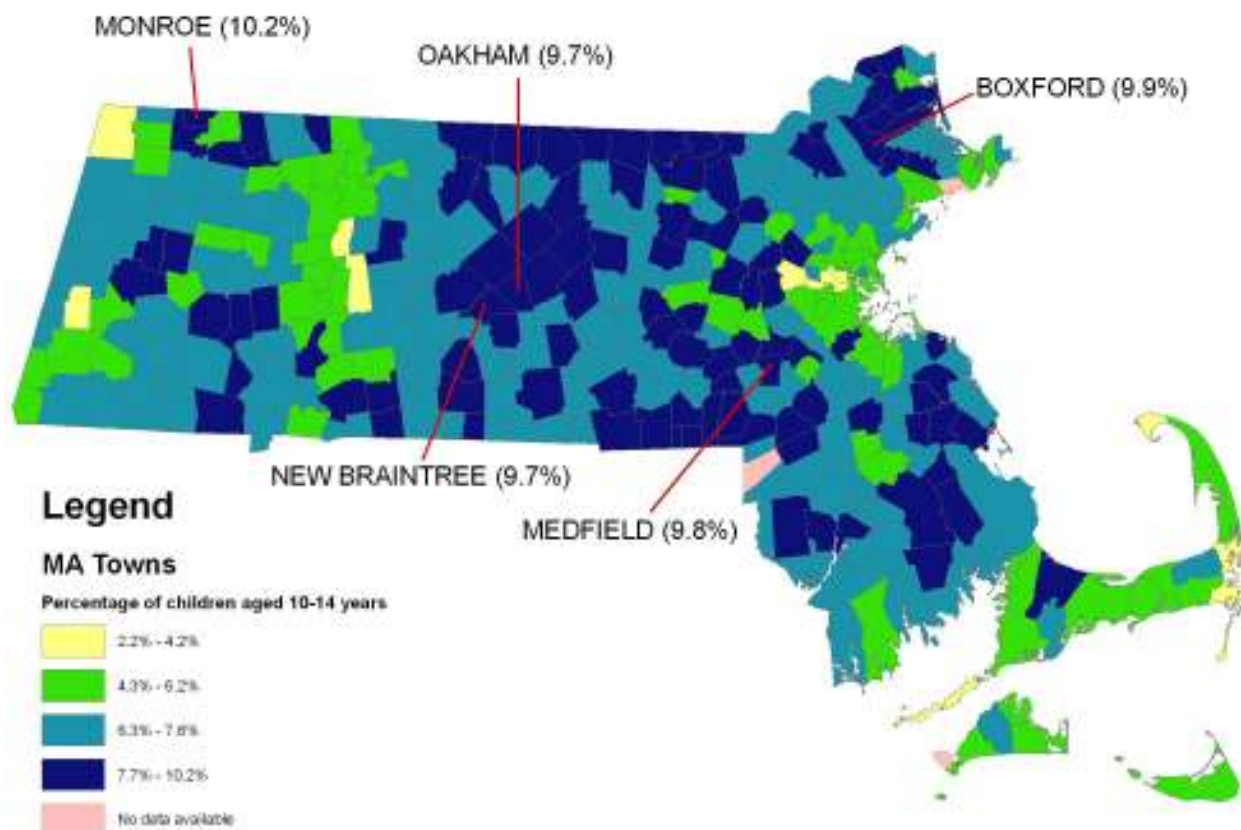
**Table O-1. Youth and young adult population —
Massachusetts and United States, 2006**

Age Group 1. 10 to 14 years	Number of Individuals in Massachusetts, 410,980	Percent of Total population, Massachusetts, 6.4	Percent of total population, United States, 6.9
Age Group 2. 15 to 19 years	Number of Individuals in Massachusetts, 446,811	Percent of Total population, Massachusetts, 6.9	Percent of total population, United States, 7.1
Age Group 3. 20 to 24 years	Number of Individuals in Massachusetts, 448,896	Percent of Total population, Massachusetts, 7.0	Percent of total population, United States, 7.1
Total 1. 10 to 24 years	Number of Individuals in Massachusetts, 1,306,687	Percent of Total population, Massachusetts, 20.3	Percent of total population, United States, 21.1
Total 2. All ages	Number of Individuals in Massachusetts, 6,437,193	Percent of Total population, Massachusetts, 100.0	Percent of total population, United States, 100.0

Source: National Center for Health Statistics. Estimates of the July 1, 2000-July 1, 2006, United States resident population from the Vintage 2006 postcensal series by year, county, age, sex, race, and Hispanic origin, prepared under a collaborative arrangement with the U.S. Census Bureau. Available on the Internet from: <http://www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm>. August 16, 2006.

- The proportion of the Massachusetts population comprised by youth aged 10 to 14 years in 2005 was 6.6%, but varied substantially in communities across the Commonwealth, see Figure O-1. Citation, MassCHIP, 2005.
- Among all communities, the towns of Monroe – 10.2% – and Boxford – 9.9% – had the highest proportions of youth aged 10 to 14 years, and the towns of Provincetown – 2.2% – and Gosnold – 2.4% – had the lowest. Citation, MassCHIP, 2005.

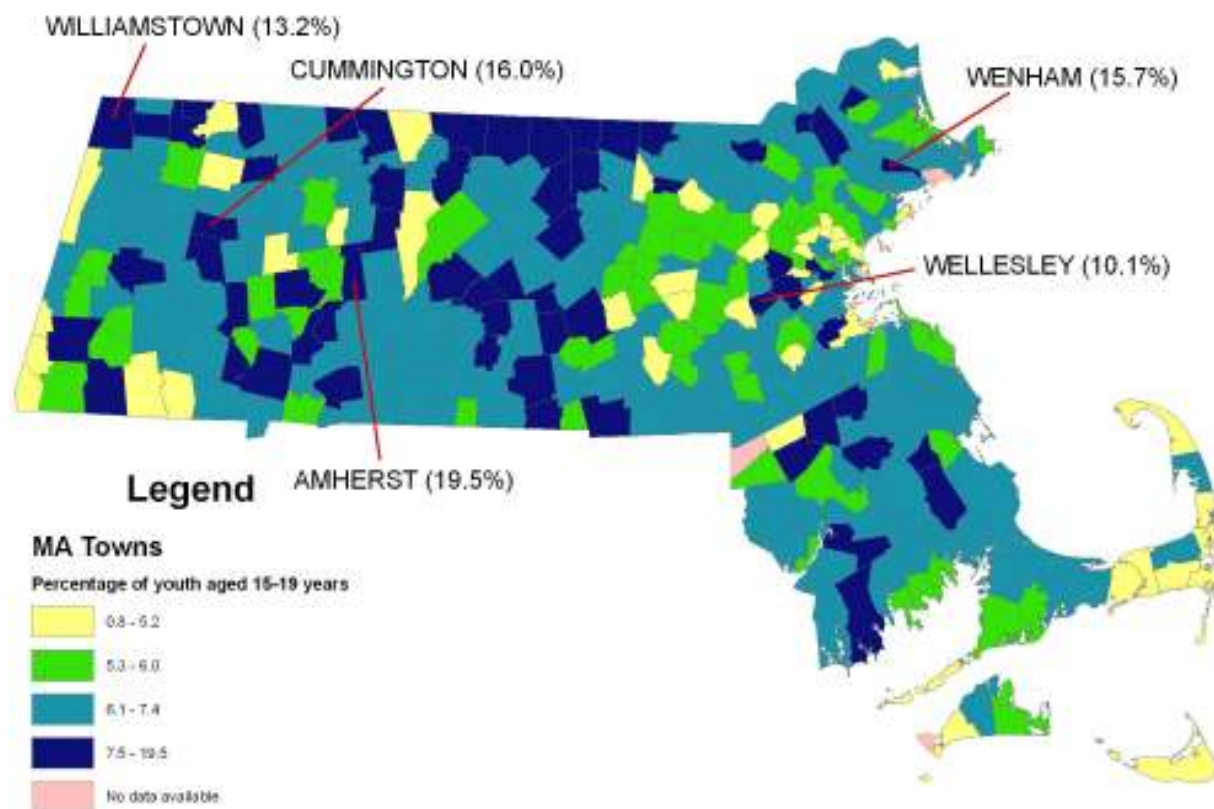
Figure O-1. Proportion of population comprised by youth aged 10 to 14 years, by community — Massachusetts, 2005



Source: MassCHIP, 2005.

- The proportion of the Massachusetts population comprised by youth aged 15 to 19 years in 2005 was 6.7% statewide, and varied considerably in communities across the Commonwealth. See figure O-2. Citation, MassCHIP, 2005.
- Among all communities, the towns of Amherst – 19.5% – and Cummington – 16.0% – had the highest proportions of youth aged 15 to 19 years, and the towns of Mount Washington – 0.8% – and Gosnold – 2.4% – had the lowest. Citation, MassCHIP, 2005.

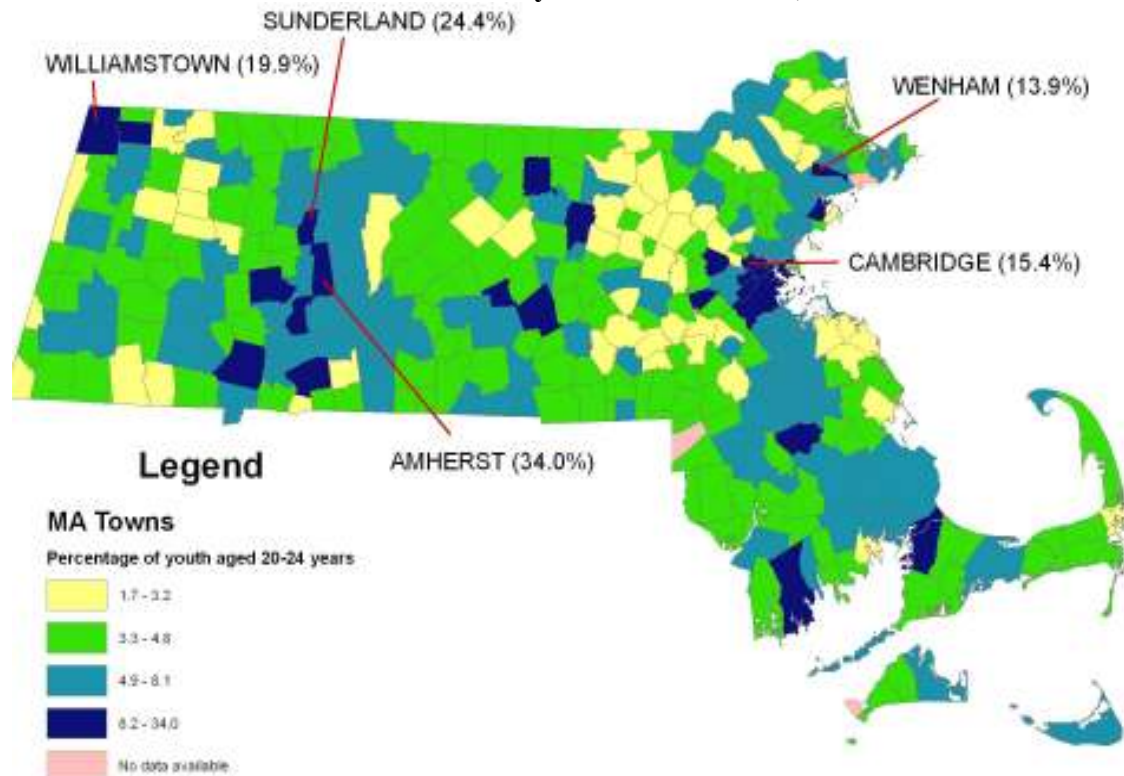
Figure O-2. Proportion of population comprised by youth aged 15 to 19 years, by community — Massachusetts, 2005



Source: MassCHIP, 2005.

- The proportion of the Massachusetts population comprised by youth aged 20 to 24 years in 2005 was 6.6% statewide but varied considerably in communities across the Commonwealth. See Figure O-3. Citation, MassCHIP, 2005.
- Among all communities, the towns of Amherst – 34.0% – and Sunderland – 24.4% – had the highest proportions of youth aged 20 to 24 years, and the towns of Sudbury, 1.7%, Carlisle – 1.7% – and Mount Washington – 1.7% – had the lowest. Citation, MassCHIP, 2005.

Figure O-3. Proportion of population comprised by youth aged 20 to 24 years, by community — Massachusetts, 2005



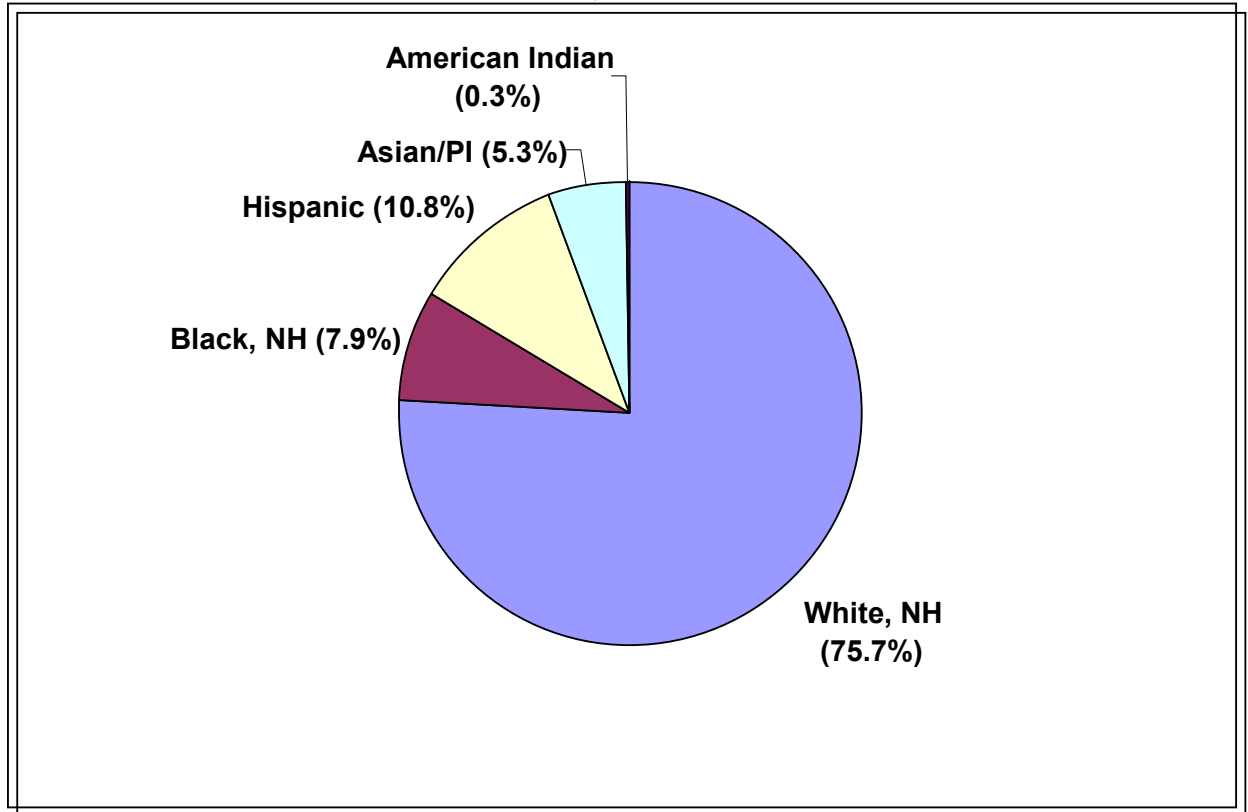
Source: MassCHIP, 2005.

RACE / ETHNICITY AND DIVERSITY

Overall, the population growth in Massachusetts over the last decade has been largely due to the immigration of minority racial and ethnic populations. These populations reside primarily in urban areas.

- Massachusetts is an increasingly ethnically and racially diverse state and youth population data indicate that this trend will continue. While the youth population is 75.7% white, non Hispanic – abbreviation NH – (See Figure O-4), this percentage has been decreasing. In particular, there is greater racial and ethnic diversity in urban areas and the Hispanic population has increased in recent years. Table O-2 provides a more detailed breakdown of race/ethnicity by age groups.

**Figure O-4. Race/ethnicity of youth and young adults aged 10 to 24 years —
Massachusetts, 2006**



Source: National Center for Health Statistics. Estimates of the July 1, 2000-July 1, 2006, United States resident population from the Vintage 2006 postcensal series by year, county, age, sex, race, and Hispanic origin, prepared under a collaborative arrangement with the U.S. Census Bureau. Available on the Internet from: <http://www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm>. August 16, 2006.
NH = non-Hispanic.

**Table O-2. Race/ethnicity of youth and young adults, by age group —
Massachusetts, 2006**

1. White, non-Hispanic	Number of individuals 10 to 14 years, 310,595	15 to 19 years, 341,423	0 to 24 years, 336,904	Total, 988,922	Percent of population youth and young adult population, 75.7
2. Black, non-Hispanic	Number of individuals 10 to 14 years, 32,599	15 to 19 years, 35,421	20 to 24 years, 34,691	Total, 102,711	Percent of population youth and young adult population, 7.9
3. Hispanic	Number of individuals 10 to 14 years, 46,958	15 to 19 years, 47,156	20 to 24 years, 47,560	Total, 141,674	Percent of population youth and young adult population,

4. Asian/Pacific-Islander, non-Hispanic	Number of individuals 10 to 14 years, 19,756	15 to 19 years, 21,517	20 to 24 years, 28,361	Total, 69,634	10.8 Percent of population youth and young adult population, 5.3
5. American Indian, non-Hispanic	Number of individuals 10 to 14 years, 1,072	15 to 19 years, 1,294	20 to 24 years, 1,380	Total, 3,746	Percent of population youth and young adult population, 0.3
6. Total	Number of individuals 10 to 14 years, 410,980	15 to 19 years, 446,811	20 to 24 years, 448,896	Total, 1,306,687	Percent of population youth and young adult population, 100.0

Source. National Center for Health Statistics. Estimates of the July 1, 2000-July 1, 2006, United States resident population from the Vintage 2006 postcensal series by year, county, age, sex, race, and Hispanic origin, prepared under a collaborative arrangement with the U.S. Census Bureau. Available on the Internet from: <http://www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm>. August 16, 2006.

SOCIOECONOMIC STATUS

Family socioeconomic status, abbreviation SES, including income, education level, and number of parents in the home, is positively correlated with indicators of child well-being. Massachusetts has one of the highest SES levels in the nation.

- In 2005 and 2006, Massachusetts was the 3rd best state in a composite ranking of child well-being based on ten key indicators of child health, education, poverty and family demographics. Citation, Annie E. Casey Foundation, *Kids Count Data Book Online*, 2008.

**Table O-3. Selected socioeconomic indicators —
Massachusetts and United States, 2000 vs. 2007**

SES Indicator 1. Median income of families with own children under 18 years	Massachusetts 2007, \$80,000	Massachusetts 2000, \$61,100	United States 2007, \$59,000	United States 2000, \$47,700
SES Indicator 2. Percent of children aged under 18 years in poverty. See note one.	Massachusetts 2007, 13%	Massachusetts 2000, 14%	United States 2007, 18%	United States 2000, 17%
SES Indicator 3. Percent of children aged under 18 yrs in extreme poverty. See note 2.	Massachusetts 2007, 6%	Massachusetts 2000, 8%	United States 2007, 8%	United States 2000, 7%
SES Indicator 4. Percent of low income – see note 3 – children aged under 18 years.	Massachusetts 2007, 26%	Massachusetts 2000, 29%	United States 2007, 39%	United States 2000, 39%
SES Indicator 5. Percent of children aged under 18 years without health insurance	Massachusetts 2006, 5%	Massachusetts 2000, 7%	United States 2006, 11%	United States 2000, 12%
SES Indicator 6. Percent of children living in single parent families that are below poverty	Massachusetts 2007, 29%	Massachusetts 2000, 29%	United States 2007, 32%	United States 2000, 31%

Note 1. Income below 100% federal poverty level

Note 2. Income below 50% federal poverty level

Note 3. Income at or below 200% federal poverty level

Source, U.S. Census Bureau, 2007 American Community Survey. Annie E. Casey Foundation, 2008

- As of June 1, 2007, there were 1,047 heads of household aged 18 years or younger receiving Transitional Aid to Families with Dependent Children. Citation, Massachusetts Department of Transitional Assistance, 2007.
- In Massachusetts during 2002 to 2005, 35% of young adults aged 18 to 24 years, with or without a disability, described themselves as having a household income below \$25,000 per year. Citation, MBRFSS, 2002 to 2005.

Food Insecurity

- According to 2005 estimates of the Economic Research Service of the USDA, food insecurity affects about 11.4% of the U.S. population and 7.8% of Massachusetts residents, meaning these residents have limited availability of nutritionally adequate and safe foods or limited ability to acquire acceptable foods in socially acceptable ways. Citation, Nord, 2006.
- There are 241 middle and high schools across Massachusetts where more than 40% of the students qualify for the federal free lunch program. To qualify, students must live in households at or below 130% of the federal poverty level. Citation, MDESE, School Lunch Program Data, 2006.
- A significant association exists between hunger and health status. Among adults reporting health problems, 65% were food insecure. Similarly, among children coming from food insecure families, 59% were in fair to poor health. Citation, Project Bread, 2006.

REFUGEE AND IMMIGRANT POPULATIONS

Massachusetts is home to many newcomers from around the world. In recent years, there have been substantial numbers of immigrants and refugees from Brazil, Central America, Haiti, China, including Tibet, Cape Verde, Russia, Vietnam, Cambodia, Dominican Republic, Albania, Columbia, Korea, Ethiopia, Laos, Somalia, the Sudan, Bosnia, and Eritrea. Estimates of newcomer populations vary due to the inherently difficult issues in counting changing populations with language and cultural isolation.

- 14.1% of Massachusetts residents are foreign born. Citation, U.S. Census Bureau, American Community Survey, 2007.

LANGUAGE

- Fifteen percent of all Massachusetts students in grades kindergarten through 12th have a primary language other than English. Citation, MDESE, *State Profile*, 2008. This percentage is expected to continue to rise, following demographic trends.
- Students for whom English is not their primary language most frequently speak Spanish, 55.1%, Portuguese, 8.0%, Khmer, 4.3%, Haitian Creole, 3.9%, Vietnamese, 3.8%, Chinese, 3.6%, and Cape Verdean, 3.5%. Citation, MDESE, 2007 through 2008.

SEXUAL ORIENTATION AND GENDER IDENTITY

Sexual orientation is “one component of a person's identity, which is made up of many other components, such as culture, ethnicity, gender, and personality traits. Sexual orientation is an enduring emotional, romantic, sexual, or affectional attraction that a person feels toward another person. Sexual orientation falls along a continuum. In other words, someone does not have to be exclusively homosexual or heterosexual, but can feel varying degrees of attraction for both genders. Sexual orientation develops across a person's lifetime—different people realize at different points in their lives that they are heterosexual, gay, lesbian, or bisexual.”

...“Sexual behavior does not necessarily equate to sexual orientation. Many adolescents—as well as many adults—may identify themselves as homosexual or bisexual without having had any sexual experience. Other young people have had sexual experiences with a person of the same gender, but do not consider themselves to be gay, lesbian, or bisexual. This is particularly relevant during adolescence because it is a time for experimentation—a hallmark of this developmental period.” - American Psychological Association, 2002

- In 2007, 9% of high school students identified themselves gay, lesbian, or bisexual, and/or reported some same sex behavior. Five percent described themselves as gay, lesbian, or bisexual and 5% reported same sex contact. Citation, MYRBS, 2007.

Information about youth who self identified as gay, lesbian, or bisexual or who reported any same sex sexual contact is reported throughout *A Shared Vision* where data are available. A general limitation is that data about youth that define themselves as transgender are not available. See *Technical Notes* for further discussion.

DISABILITIES AND SPECIAL HEALTH CARE NEEDS

Children with special health care needs, abbreviation SHCN, are those “who have or are at increased risk for a chronic, physical, developmental, behavioral or emotional condition and who also require health and related services of a type or amount beyond that required by children generally.” Citation, Van Dyck, 2002. Historically, there has not been a source of data that is inclusive of all children and youth that meet these criteria for special health needs.

- According to the 2005 to 2006 National Survey of Children with Special Health Care Needs, 16% of children aged 0 to 17 years in Massachusetts have SHCN compared to 14% in the U.S. The prevalence of SHCN among children increases with age from 10% for children aged less than 5 years, to 18% for those aged 6 to 11 years and 21% among those aged 12 to 17 years. Almost 20% of males and 13% of females aged less than 18 years in Massachusetts have SHCN compared to 16% and 12%, nationally. Twenty four percent of multi racial, non Hispanic, 17% of White non Hispanic, 15% of Black non Hispanic, and 8% of other, non Hispanic children were reported to have a SHCN. Citation, CAHMI, 2008.

- Based on the 2007 Massachusetts Youth Health Survey, 19% of middle school youth and 26% of high school youth in Massachusetts reported having a disability. Prevalence of disability increased with grade level of students from 17% among those in 6th grade to 26% among those in 12th grade. Twenty percent of female and 18% of male middle school students reported having a disability, compared to 28% of high school females and 24% of high school males. The percentage of White, non Hispanic middle school students who reported having a disability was 19%, Black, non Hispanic 17%, Hispanic 21%, Asian non Hispanic 19%, Native Hawaiian/Pacific Islander 19%, Native American 11%, and other multi race 27%. Among high school students, the percentage of White, non Hispanics who reported having a disability was 26%, Black, non Hispanic 26%, Hispanic 25%, Asian non Hispanic 14%, Native Hawaiian/Pacific Islander 22%, Native American 33%, and other multi race 40%. Citation, MYHS, 2007.
- Sixteen percent of noninstitutionalized young adults aged 18 to 24 years reported having a disability. Almost 18% of men in Massachusetts had a disability compared with 15% of women. Citation, MBRFSS, 2002 to 2005.

The definitions of individuals with special health care needs or disabilities differ based on data source. The three data sources used in this report to examine characteristics of and health behaviors and outcomes for persons with special health care needs and disabilities are the National Survey of Children with Special Health Care Needs, NS-CSHCN, the Massachusetts Youth Health Survey, MYHS, and the Massachusetts Behavior Risk Factor Surveillance System, BRFSS. Information about youth with disabilities is reported throughout *A Shared Vision* where data are available

Goal

1

All youth have access to resources that promote optimal physical and mental health.

A Shared Vision:

All Massachusetts youth grow up to be **healthy**, caring and economically self-sufficient adults.

This section examines access to health resources through efforts to reduce the uninsured and reports outcomes related to *Healthy People 2010 (HP2010)*, the national blueprint for improving health status in the United States in this decade. HP2010 identifies 21 critical national objectives for adolescent health. *A Shared Vision* has adopted these objectives and their associated indicators as the framework for assessing the health of youth in Massachusetts in relation to Goal 1. (See Technical Notes for a list of the 21 Critical Health Objectives for Adolescents and Young Adults).

These 21 critical objectives reflect the major public health issues facing American youth today - physical activity, overweight and obesity, tobacco use, substance abuse, responsible sexual behavior, mental health, and injuries and violence. For each objective, a leading health indicator has been established. Most of the indicators are based on existing national and state-based data sources, but several are still in the developmental stages of identifying appropriate data. For all but the developmental indicators, *HP2010* has established a target to achieve by the year 2010. HP2010 indicators measure, in part, whether young people are accessing appropriate health information and services.

While Massachusetts collects data on each of these leading indicators, from time to time the *HP2010* definition of the indicator and/or the national data collection methodology differs from that in Massachusetts. In these cases, the *HP2010* target is not displayed because of the non-comparability of data.

ACCESS TO HEALTH CARE

Access to health care is a critical component of adolescent health. Insured youth are more likely to receive recommended preventive visits and have fewer unmet health needs.

CHILDREN AND YOUTH

As the result of major expansions in MassHealth (Medicaid) eligibility since 1998 (which incorporate the federal Children's Health Insurance Plan) and the availability of the Children's Medical Security Plan (CMSP), Massachusetts has one of the highest rates of health insurance coverage for youth in the nation. The percent of uninsured children and youth aged 0–18 years decreased from 3.2% in 2004 to 2.5% in 2006. The uninsured rate for youth aged 13–18 years decreased from 4.7% in 2004 to 3.1% in 2006 (MA Division of Health Care Finance and Policy, 2006).

- In 2006, Hispanic children and youth aged 0–18 years were more likely to be uninsured (5.0%) than their White, non-Hispanic (1.5%) and other, non-Hispanic (2.4%) counterparts (MA Division of Health Care Finance and Policy, 2006).
- During state fiscal year 2008, 117,974 youth aged 10–14 years and 116,148 youth aged 15–19 years were eligible for MassHealth. An additional 7,239 youth aged 15–19 years were enrolled in Commonwealth Care (MassHealth Data Warehouse, 2008).

YOUNG ADULTS

- Nationally, 30.6% of persons aged 18–24 years were uninsured in 2005 (DeNavas-Walt, 2006). The proportion of young adults aged 19–24 years in Massachusetts who were uninsured decreased from 25.4% in 2004 to 18.9% in 2006. However, this age group has the highest uninsured population of all age groups in Massachusetts (MA Division of Health Care Finance and Policy, 2006).
- During state fiscal year 2008, 59,474 young adults aged 20–24 years were eligible for MassHealth and 42,639 were enrolled in Commonwealth Care (MassHealth Data Warehouse, 2008).

YOUTH WITH DISABILITIES

An ongoing issue for youth and young adults with disabilities is that the adult health care system is not fully equipped to provide care to adults with disabilities, particularly those with childhood-onset conditions. Lack of appropriate adult primary and preventive care is one of numerous barriers to transition from pediatric or youth to adult medical care. As a result, many young adults with disabilities remain with their pediatric providers well into adulthood, thus potentially increasing the risk of not receiving age-appropriate care (Timmons et al., 1997). MassHealth CommonHealth offers health care benefits to disabled children aged 18 years and younger and some disabled young adults who qualify and who cannot get MassHealth Standard. Benefits offered by MassHealth CommonHealth are similar to those offered under MassHealth Standard. There is no income limit for MassHealth CommonHealth, however a premium may apply.

UTILIZATION OF HEALTH CARE

- The MassHealth HEDIS Adolescent Well-Care Visits measure assesses whether adolescent members aged 12–21 years had at least one well-care visit with a primary care provider or OB-GYN during the measurement year. In 2002, the MassHealth Plan weighted mean (all MassHealth managed care members in all plans) was 51.0%; in 2004: 59.3%; and in 2006: 63.7% (MassHealth, 2008).
- The MassHealth HEDIS Adolescents' Access to Primary Care Practitioners measure reflects general access to care by indicating whether adolescents had a preventive or ambulatory care visit (any type of visit) with a primary care practitioner during the measurement year or the year prior to the measurement year. In HEDIS 2004, the MassHealth Weighted Mean for members aged 12–19 years who had at least one visit with a primary care practitioner in 2002 or 2003 was 93.8% and in HEDIS 2006, 93.7% (during 2004 or 2005) (MassHealth, 2008).

HEALTH CARE REFORM

The Massachusetts Health Care Reform law, a plan to reduce the number of people in Massachusetts who have no health insurance and to improve the cost and quality of health care, was passed in April of 2006 (Commonwealth Connector, 2007). The law requires that starting July 1, 2007 all Massachusetts residents must have health insurance. The bill increases MassHealth eligibility to children in families up to 300% of the federal poverty level (\$38,500 for a family of two). Under the new law, dependents can be covered under their parent's insurance plans two years after they lose their dependency status, or until age 26, whichever comes first. It is recommended that families check with their plans directly, as some plans do not have to make this change. The Massachusetts Health Commonwealth Health Insurance Connector Authority also offers Commonwealth Choice Young Adult Plan (YAP) options for independent young adults aged 19–26 years who do not have access to employer-sponsored or educational institution-sponsored health insurance plans. Future editions or updates to *A Shared Vision* should show the impact of the Health Care Reform Law on access for young adults in the Commonwealth.

YOUTH HEALTH INDICATORS

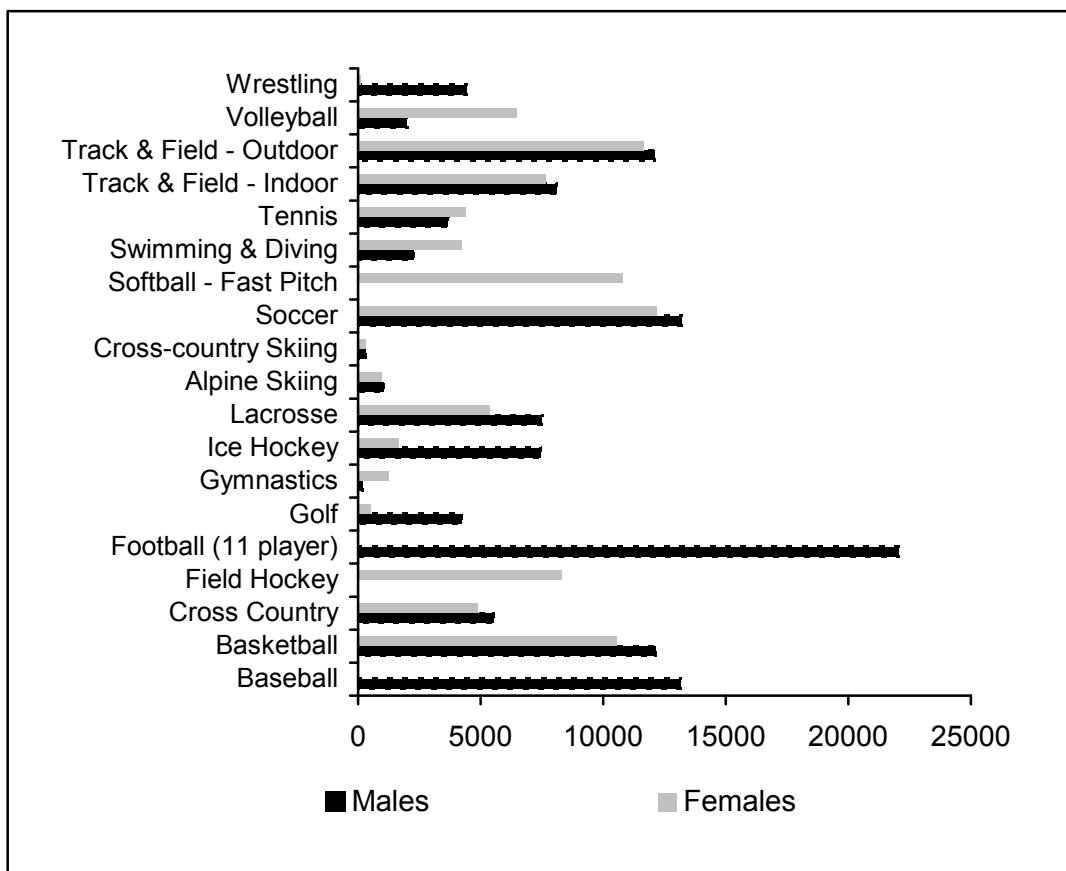
PHYSICAL ACTIVITY

Regular physical activity is important for overall health and chronic disease prevention. Youth participation in sports and regular aerobic exercise has the additional benefit of being associated with lower rates of cigarette smoking, marijuana use, recent sexual activity, and serious depression (MYRBS, 2001).

- Forty-one percent of high school students reported that they were physically active for a total of at least 60 minutes per day on five or more of the past seven days (50% of males and 32% of females) (MYRBS, 2007).
- Middle school males were more likely than females to report participating in 3 days or more of vigorous physical activity a week (75% vs. 70%; MYHS, 2004). However, middle school males were also more likely than females to report no days of moderate physical activity (26% vs. 19%; MYHS, 2004).
- Forty-four percent of White, non-Hispanic, 37% of Black, non-Hispanic, 32% of Hispanic, and 29% of Asian students reported that they were physically active for a total of at least 60 minutes per day on five or more of the past seven days (MYRBS, 2007).
- Among high school students, physical activity declined with grade level. Ninth grade students were more likely than twelfth grade students to report 60 minutes or more of physical activity per day for five or more days in the past week (49% vs. 36%) and playing on one or more sports teams in the past year (70% vs. 53%) (MYRBS, 2007).
- In recent years, there has also been a significant decline in the percentage of high school students reporting that they participated in physical education classes on one or more days during an average school week, from 80% in 1995 down to 61% in 2007 (MYRBS, 2007).
- During the 2005–2006 school year, 210,516 Massachusetts high school students competed in sports (Figure 1-1) (National Federation of State High School Associations, 2006). This number represents the total number of competitors; if one student participated in more than one sport, s/he is counted multiple times.

- In Massachusetts, the most popular sport among male high school athletes was football, and among female athletes was soccer (Figure 1-1) (National Federation of State High School Associations, 2006).
- High levels of sedentary behavior may be contributing to excessive weight gain. Twenty-eight percent of high school students watched three or more hours of television on school days. Over half of high school students who identified as Black, non-Hispanic (55%) and 43% of those who identified as Hispanic reported watching 3+ hours of television on school days compared with 27% of Asian and 23% of White, non-Hispanic students (MYRBS, 2007).
- Twenty-nine percent of high school students reported 3+ hours per day of non-school related video game and/or computer usage (MYRBS, 2007).
- Eighteen percent of middle school students reported using the Internet for 3 or more hours on an average school day (17% of males and 19% of females). The percentage of students reporting 3+ hours of Internet usage per day increased with grade in school (14% of 6th graders, 19% of 7th graders, and 22% of 8th graders) (MYHS, 2007).
- Only 54% of Massachusetts young adults aged 18–24 years with a disability participated in regular physical activity, compared to 61% of young adults without a disability (MBRFSS, 2003–2005).

Figure 1-1. High school student participation in competitive school sports, by sport and gender — Massachusetts 2005–2006



Source: National Federation of State High School Associations, 2006.

OVERWEIGHT

Being overweight⁴ is a significant risk factor for the development of diabetes, heart disease, and other chronic diseases. The number of youth and young adults who are overweight or at risk for overweight has increased dramatically in the past two decades, reaching proportions that have been called epidemic by the Surgeon General. Nationally, three times as many adolescents were overweight in 2000 as in 1980 (US Department of Health and Human Services, 2001).

Unhealthy dietary patterns and inadequate physical activity both contribute to overweight and obesity later in life. Adolescence is a crucial time when youth can develop eating habits and behaviors that set the course for health and well being in adulthood.

Healthy People 2010 Adolescent Objective 19-03 b: Reduce the proportion of children and adolescents who are overweight or obese.*

According to their Body Mass Index, calculated on the basis of self-reported height and weight, eleven percent of high school and middle school students in Massachusetts were overweight, which is more than double the Healthy People 2010 benchmark (Table 1-1). An additional 18%

⁴ See *Technical Notes* for definitions of at risk for overweight and overweight, and for body mass index calculations.

* Overweight or obese refers to BMI for age \geq 95th percentile.

of middle school students and 15% of high school students were at risk for overweight (MYHS, 2007; MYRBS, 2007).

Table 1-1. Percentage of middle and high school students who are overweight — Massachusetts and United States

	Massachusetts, 2004/5	U.S., 2003/5	Massachusetts, 2007	HP2010 target
Middle School	10% (2004)*	14% (2003)**	11%	5%
High School	11% (2005) [†]	13% (2005) ^{††}	11%	5%

Source: *Massachusetts middle school data are from MYHS, 2004 and 2007; ** U.S. middle school data are from National Survey of Children's Health, 2003 (children aged 12–14 years);

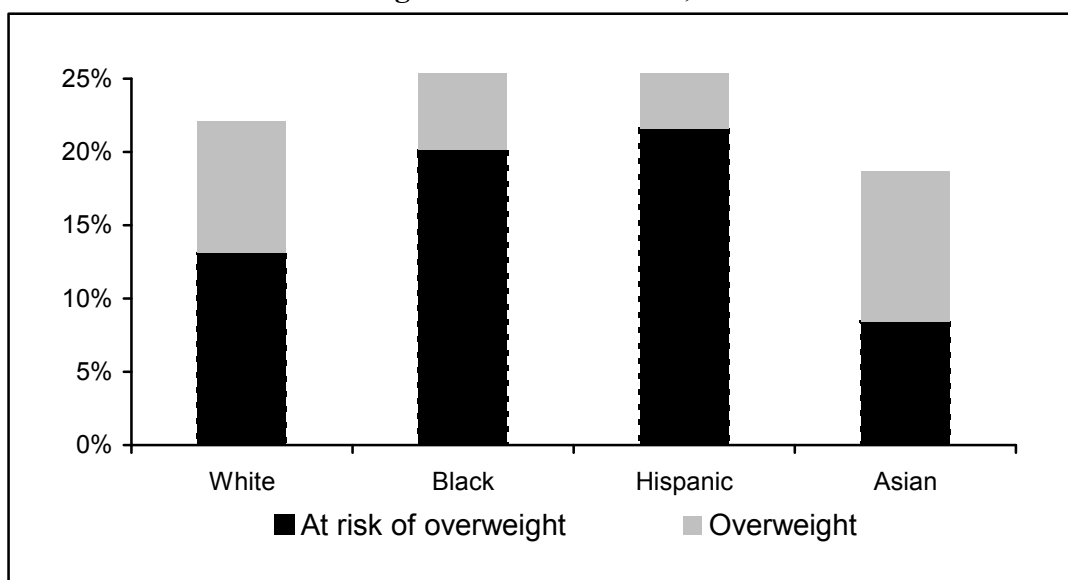
[†]Massachusetts high school data are from MYRBS, 2005 and 2007; ^{††}U.S. high school data are from YRBSS, 2005.

- Greater proportions of Black, non-Hispanic and Hispanic high school students reported they were overweight or at risk for being overweight compared to other racial/ethnic groups (MYRBS, 2007) (Figure 1-2).
- A greater proportion of high school males were overweight or at risk for overweight than females (29% vs. 22%) (Figure 1-3). The same trend was seen in middle schools, where 33% of males were at risk for overweight or overweight compared to 25% of females (MYRBS, 2007; MYHS, 2007).
- Among high school females, 22% were overweight or at risk of being overweight, but greater proportions of females viewed themselves as being overweight (36%) or were trying to lose weight (63%) (MYRBS, 2007).
- More than one in four (26%) young adults with disabilities aged 18–24 years were obese⁵ compared to 16% of their non-disabled counterparts. Forty-seven percent of disabled young adults were overweight compared with 38% of their non-disabled counterparts (MBRFSS, 2004–06).
- Female middle school students considered to be a healthy weight are almost two times more likely to incorrectly classify themselves as being slightly or very overweight compared to their male counterparts of a healthy weight (13% vs. 8%). The disparity between female and male high school students is even greater (23% vs. 6%) (MYHS, 2007; MYRBS, 2007).
- Nearly half (46%) of Massachusetts high school students in 2007 were currently trying to lose weight. Females were more likely to report they were trying to lose weight compared to males (63% vs. 29%) (MYRBS, 2007).
- Despite the fact that most students were of a healthy weight according to their BMI based on age and sex, 15% of high school students reported engaging in at least one unhealthy weight control practice, which may include 24-hour fasting, vomiting after eating, diet pill consumption (without a prescription), or laxative consumption (MYRBS, 2007).

⁵ See *Technical Notes* for definitions of overweight and obesity for adults, and for body mass index calculations.

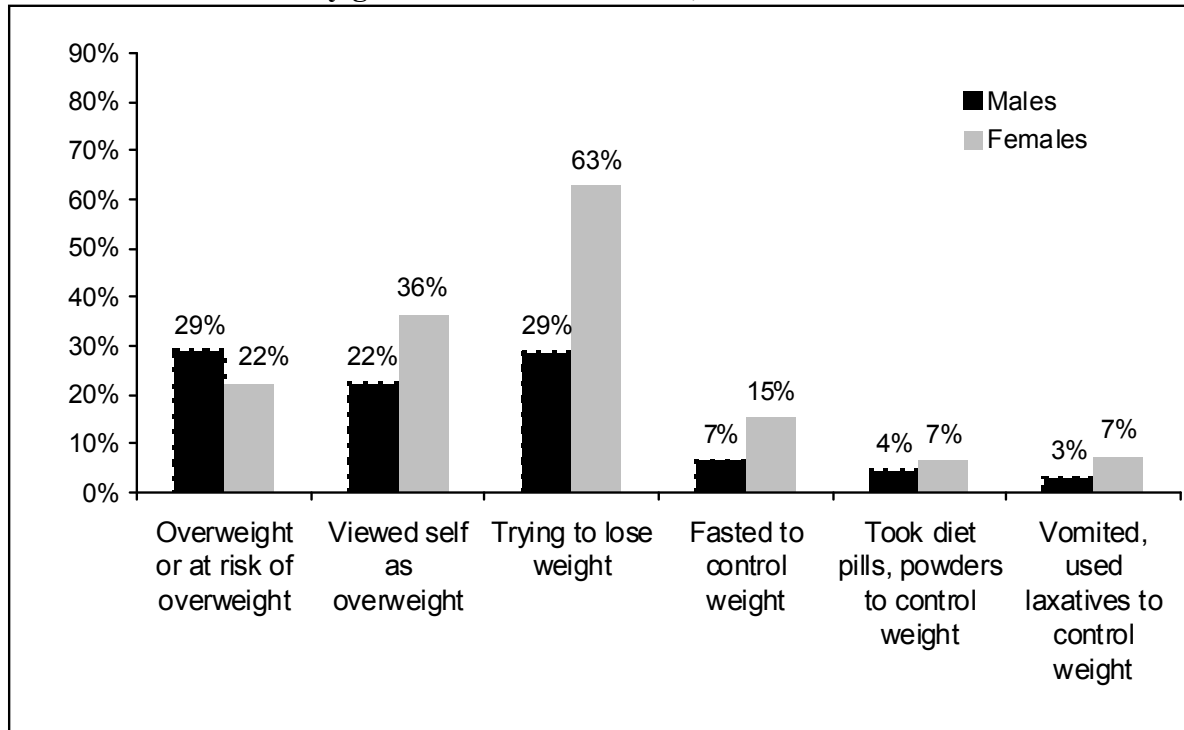
- Despite their known health benefits, only 15% of Massachusetts high school students and 25% of young adults aged 18–24 years consumed the recommended intake of five fruits and vegetables per day (MYRBS, 2007; MBRFSS, 2005). In fact, among Massachusetts high school students intake of five fruits and vegetables per day has decreased from 17% in 1999 to 15% in 2007 (MYRBS, 2007). Among middle school students, 28% of males and 24% of females reported eating no vegetables the day before survey administration (MYHS, 2007).
- In 2007, 15% of high school students drank three or more glasses of milk per day (the amount that would supply the recommended level of calcium for youth) during the week before survey administration, down from 22% in 1999 (MYRBS, 2007). Male students drank more milk than female students (19% of males vs. 10% of females drank at least 3 glasses of milk per day).
- Being overweight is a risk factor for the development of Type 2 diabetes. In 2007, 3% of middle school students reported that they were told by a physician that they have diabetes (either Type 1 or Type 2) (MYHS, 2007).
- Among high school students, 4% reported they were told by a physician that they have diabetes (either Type 1 or Type 2) (MYHS, 2007).

Figure 1-2. Percentage of high school students who are at risk of overweight or are overweight — Massachusetts, 2007



Source: MYRBS, 2007

Figure 1-3. Weight and weight control among high school students by gender — Massachusetts, 2007



Source: MYRBS, 2007

Food Insecurity

Since 1995, the US Census Bureau has implemented the Standard Food Insecurity Survey (SFIS). The SFIS measures a family's ability to obtain nutritious food on a consistent basis over time. In this model, hunger is defined as the most severe form of food insecurity.

- According to 2005 estimates of the Economic Research Service of the USDA, food insecurity affects about 11% of the U.S. population and 8% of Massachusetts residents, meaning these residents have limited availability of nutritionally adequate and safe foods or limited ability to acquire acceptable foods in socially acceptable ways (Nord, 2006).
- Based on results averaged over a three-year period (2002–2004), 7.1% of all households in Massachusetts (approximately 175,000) were food insecure, representing an increase from the previous period (1999–2001), when 6.7% of all households statewide were food insecure. Food insecurity has reached unprecedented levels in low-income communities, where 32% were food insecure in 2005, up from 20% in 2003 (Project Bread, 2006).
- Today 101,000 children from low-income families receive school breakfast, a seven percent increase over the past five years (Rosso, 2005). Likewise, in low-income communities, 68% of elementary school-aged children participated in the School Breakfast Program (Massachusetts Hunger Assessment II, 2006). There are 241 middle and high schools across Massachusetts where more than 40% of the students qualify for the federal free lunch program. To qualify, students must live in households at or below 130% of the federal poverty level (MDESE, School Lunch Program Data, 2006).

- Chronic food insecurity can cause anxiety, negative feelings about self worth, and hostility toward the outside world. Youth who suffer from food insecurity are faced with a lack of access to food combined with other social pressures that impact how and what they eat. This may cause youth to develop eating patterns that lead to chronic health problems such as obesity, diabetes, and heart disease (Project Bread, 2006). (See *Goal 1: Overweight* for further information on overweight among young.)
- Only 16% of households surveyed in Massachusetts reported using an emergency food program, and just 25% of food insecure households received emergency food (Massachusetts Hunger Assessment II, 2006). This is consistent with national surveys, which find that only 20% of food-insecure households obtain food at an emergency food pantry (Nord, 2005)
- A significant association exists between hunger and health status. Among adults reporting health problems, 65% were food insecure. Similarly, among children coming from food-insecure families, 59% were in fair to poor health (Project Bread, 2006).

SUBSTANCE ABUSE

Adolescence and young adulthood are high-risk periods for experimenting with alcohol, tobacco, and other drugs. Alcohol and cigarettes are the most commonly used substances by high school students.

TOBACCO USE

Cigarette smoking causes 9,000 deaths, or about 1 of 6 deaths, in Massachusetts each year (Carpenter, 2004). About 9 in 10 cigarette smokers started smoking regularly in their teenage years. The earlier the age at which people begin to smoke, the greater their likelihood of permanent lung damage and the more likely they are to be heavily addicted (Wiencke, 1999). In addition to being a serious health threat, adolescent tobacco use is also associated with illicit drug use, alcohol use, and poor school performance (MDPH, 2006).

Definitions of Smoking

Current smoking: smoked cigarettes on one or more of the 30 days preceding the survey.

Lifetime use: Ever tried smoking cigarettes, even one or two puffs.

Healthy People 2010 Adolescent Objective 27-02 a: Reduce tobacco use by adolescents.

- In 2007, 18% of high school students were current cigarette smokers, somewhat less than the national average (Table 1-2).

Table 1-2. Percentage of high school students who are current smokers — Massachusetts and United States

Massachusetts, 2005	U.S., 2005	Massachusetts, 2007	HP2010 target
21%	23%	18%	16%

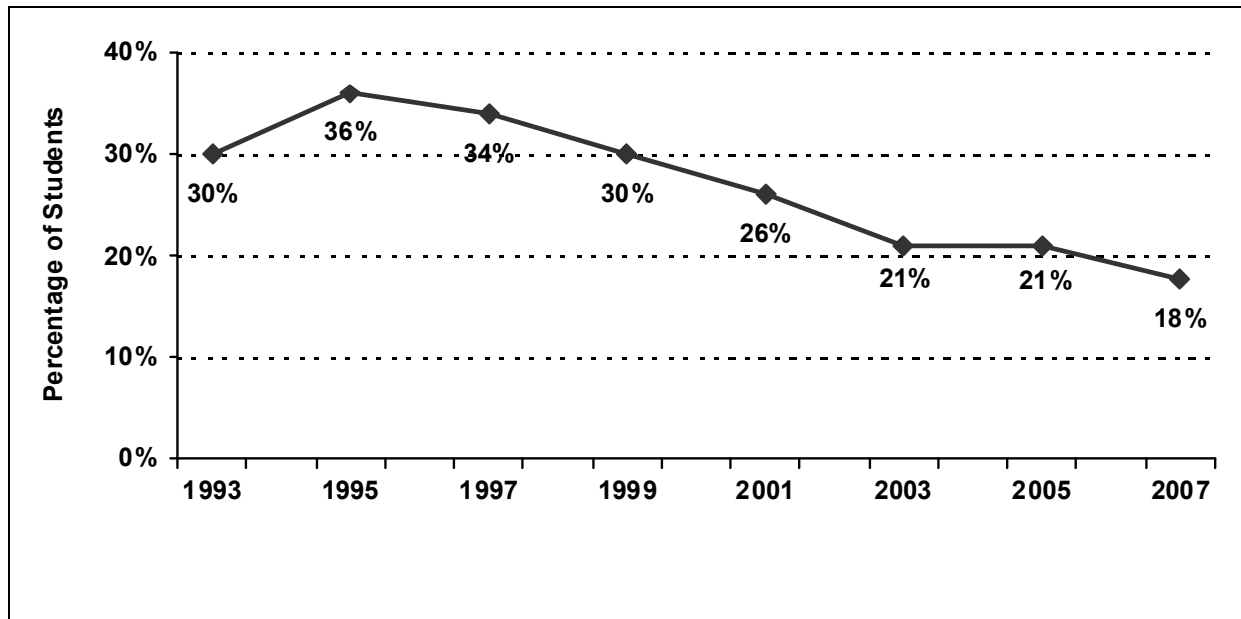
Source: MYRBS, 2005 and 2007; YRBSS, 2005 (latest available)

- Youth with disabilities were more likely to smoke than those without disabilities. Approximately 27% of middle school youth with disabilities had ever tried smoking (even one or two puffs) and 11% were current smokers compared to 11% and 2%, respectively, of

those without disabilities. Among high school youth, half (50%) of those with disabilities were lifetime smokers and 24% were current smokers compared to 38% and 15%, respectively, of those without disabilities (MYHS, 2007).

- High school smoking rates in Massachusetts declined dramatically from 1995 (36%) to 2002 (21%) (Figure 1-4). Coinciding with about a 90% reduction in tobacco control funding in fiscal year 2003, the rate of high school smoking did not change from 2002 (21%) to 2005 (21%). In 2007, the rate of high school smoking fell to 18% (MYRBS, 2007).

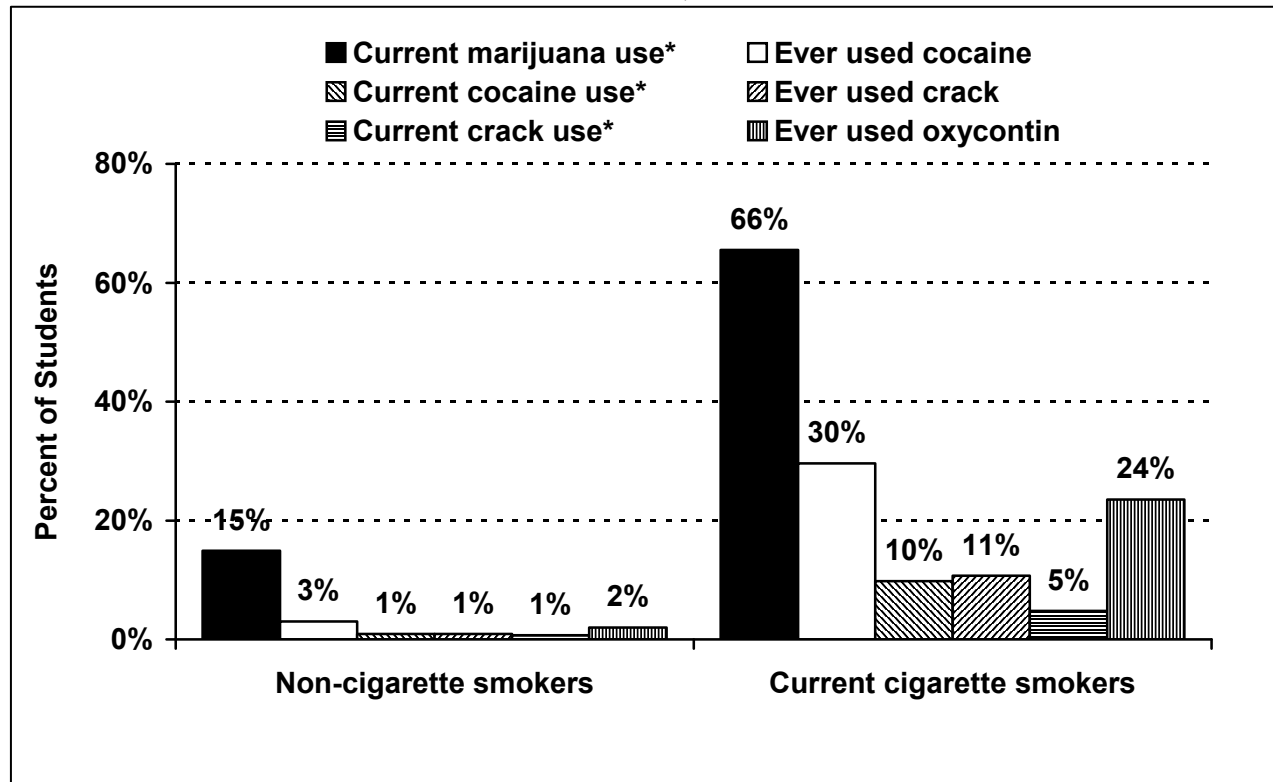
Figure 1-4. Trend in current cigarette use among high school students — Massachusetts, 1993–2007



Source: MYRBS, 1993–2007.

- Massachusetts high school students who are more likely to be current cigarette smokers include students who: have one or more friends who smoke (35%), have a long-term emotional problem or learning disability (30%), live at home with a smoker (26%), and those who think that most people their age smoke cigarettes (23%) (MYHS, 2007).
- High school cigarette smokers in Massachusetts are more likely to engage in other risky behaviors such as substance abuse (Figure 1-5). Compared to high school students who did not smoke cigarettes, current cigarette smokers are:
 - more than 4 times more likely to report current marijuana use,
 - about 10 times more likely to report ever using cocaine,
 - 11 times more likely to report current cocaine use,
 - 10 times more likely to report ever using crack,
 - about 7 times more likely to report current crack use, and
 - 11 times more likely to have ever tried oxycontin without a prescription.

Figure 1-5. Cigarette smoking status and drug use among high school students — Massachusetts, 2007



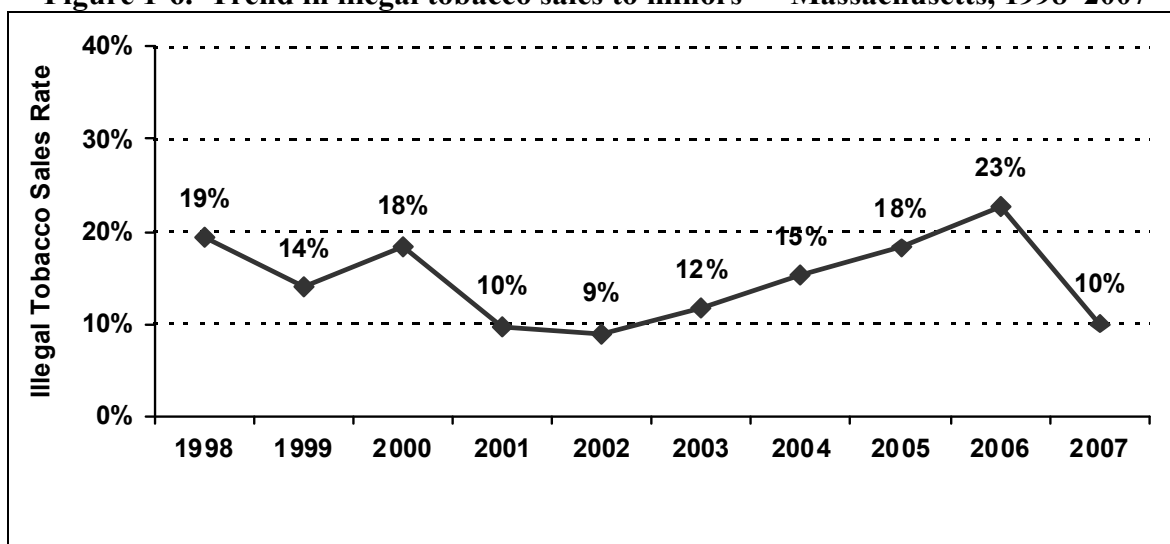
Source: MYHS, 2007.

* Current use is reported use in the past 30 days

The Massachusetts Tobacco Control Program (MTCP) oversees young people attempting to purchase tobacco products in order to test retailers' compliance with the law prohibiting tobacco sales to persons aged less than 18 years. The rate of illegal tobacco sales to minors is an indicator of youth access to tobacco.

- Illegal sales to minors in Massachusetts declined from 19% of purchase attempts in 1998 to 9% in 2002. This represents a 51% decline (Figure 1-6).
- Since reaching a low of 9% illegal sales in 2002, the percentage of sales to minors has increased annually and reached 23% in 2006 (MDPH, BSAS).
- Most recently, in 2007, the rate of illegal sales to minors dropped to 10.3% following a reinvigorated enforcement effort.

Figure 1-6. Trend in illegal tobacco sales to minors — Massachusetts, 1998–2007



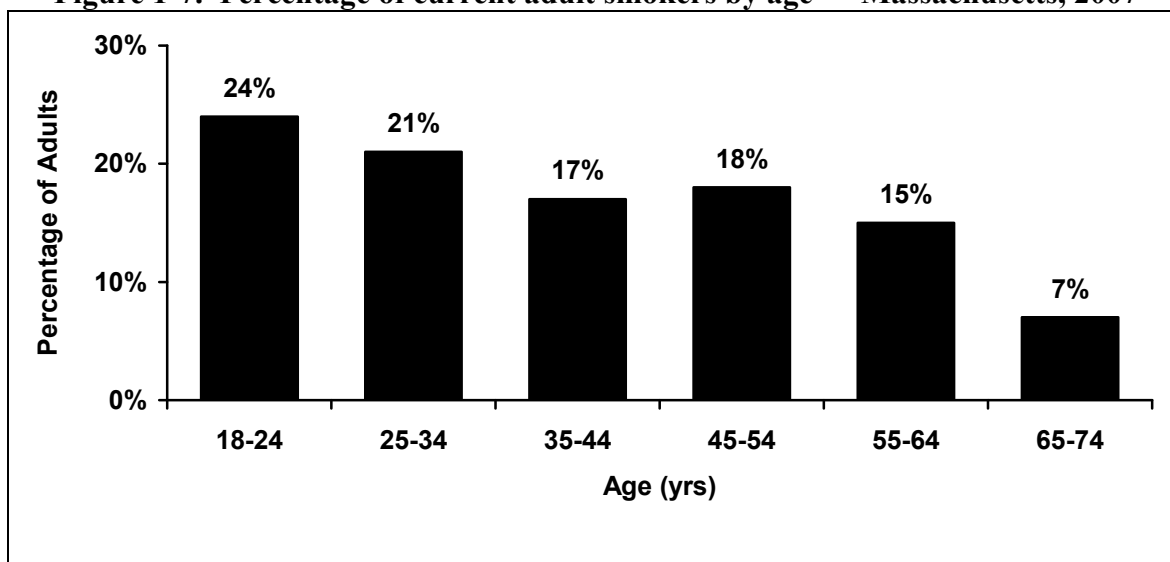
Source: Massachusetts Department of Public Health, Bureau of Substance Abuse Services, Annual Synar Report 1998–2007.

- In communities with boards of health funded by the MTCP, the illegal sales rate was 14% in 2006. For communities with no funded board of health, the illegal sales rate was 29% in 2006 (MDPH, MTCP, 2006).

Young Adult Population

- In 2007, 24% of young adults aged 18 to 24 years were current smokers, the same as the national prevalence of 24% (MBRFSS, 2007). Among adults in Massachusetts, young adults have the highest rate of smoking of any age group (Figure 1-7).

Figure 1-7. Percentage of current adult smokers by age — Massachusetts, 2007



Source: MBRFSS 2007.

- Massachusetts young adults who did not attend college are more likely to be smokers (25%) than those who graduated college (7%) (MBRFSS, 2007).
- Thirty-five percent of young adults – aged 18–24 years – with disabilities were current smokers compared to 23% of those without disabilities (MBRFSS, 2007).

MTCP-funded Programs

Research has demonstrated that tobacco control efforts including school-based, media, and community elements can be effective in reducing youth smoking (U.S. DHHS, 2000). During 1994–2002, MTCP funded community-based youth programs, a statewide media campaign, and school-based tobacco education. Many of these programs could not be sustained through the funding cuts in FY 2003. The most promising programs are being revived.

- MTCP began funding the statewide Youth Action Initiative (YAI) in January 2006. Forty-two mini-grants were awarded to youth groups. The program is designed to educate and empower young people aged 12–18 years to counteract tobacco marketing, change social norms around tobacco use, and reduce youth tobacco use in Massachusetts.
- In October 2006, MTCP awarded youth access grants to six communities to monitor retailer compliance with the state law prohibiting tobacco sales to minors.
- In January 2007, MTCP began funding community smoking intervention projects that are evidence-based and targeted to geographic areas with the highest rates of smoking.

ALCOHOL USE

Consumption of alcohol, the most common drug used by youth, can pose a serious threat to health and safety. Underage drinking is a major contributing factor in approximately half of all motor vehicle crashes, homicides, and suicides; the three leading causes of death and disability among youth (MYRBS, 2001; Perrine, 1988). Alcohol use is also a major cause of diseases such as liver cirrhosis, pancreatitis, and certain cancers (Massachusetts Youth Alcohol Prevention Task Force, 2002). Further, alcohol dependence and alcoholism are more likely to develop among people who begin drinking during early adolescence than among those who begin drinking at the legal age (MYRBS, 2005; Grant, 1997).

Binge Drinking

Binge drinking (see box for definitions of alcohol use) has been consistently linked with driving injuries and fatalities, unplanned sexual activity, physical and sexual assaults, physical injury, and criminal mischief (Massachusetts Youth Alcohol Prevention Task Force, 2002).

Healthy People 2010 Adolescent Objective 26-11 d: Reduce the proportion of persons engaging in binge drinking of alcoholic beverages.

- More than one in four (28%) high school students engaged in at least one episode of binge drinking in 2007, higher than the national average (Table 1-3). Six

Definitions of alcohol use

Binge drinking: Consumption of five or more alcoholic drinks in a row, on one occasion, in the past 30 days.

Recent or Current alcohol use: Consumption of one or more alcoholic drinks on at least one of the past 30 days.

Lifetime alcohol use: Any consumption of alcohol during one's life, except one or two sips for religious purposes.

percent of high school students engaged in frequent binge drinking – six or more heavy drinking episodes in the past month, an average of more than once a week (MYRBS, 2007).

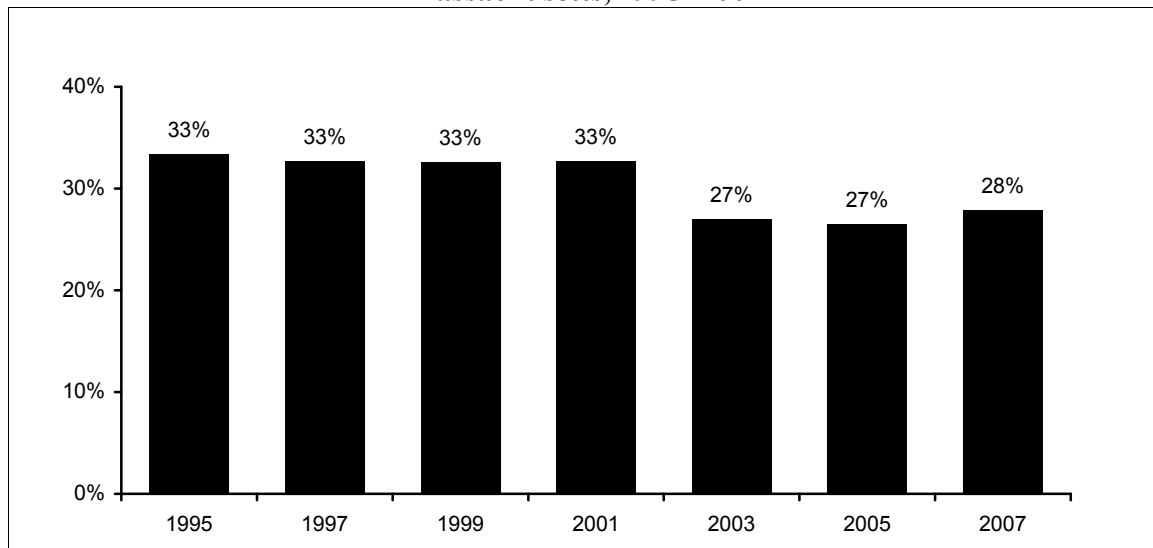
Table 1-3. Percentage of high school students who engaged in binge drinking — Massachusetts and United States

Massachusetts, 2005	U.S., 2005	Massachusetts, 2007	<i>HP2010</i> target
27%	26%	28%	11%*

**HP2010* target is based on a different data source, and is not directly comparable.
Source: MYRBS, 2005, 2007; YRBSS 2005

- Rates of binge drinking increase with grade level. In 2007, 17% of 9th graders and 39% of 12th graders engaged in binge drinking (MYRBS, 2007).
- After remaining steady from 1995 to 2001, the rates of binge drinking decreased in 2003 and have remained relatively stable over the past few years (Figure 1-8) (MYRBS, 1995–2007).

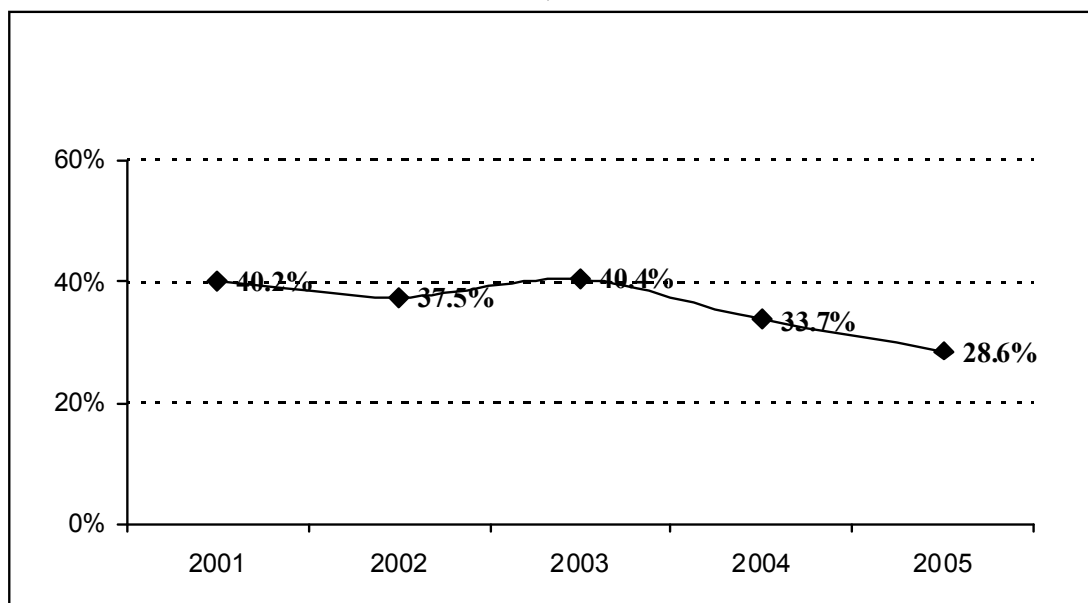
Figure 1-8. Percentage of high school students who engaged in binge drinking — Massachusetts, 1995–2007



Source: MYRBS, 1995–2007

- In 2005, 29% of Massachusetts youth aged 18–24 years reported at least one episode of binge drinking in the past 30 days, a substantial decrease from 40% in 2003 (Figure 1-9) (MBRFSS, 2001–2005).

Figure 1-9. Percentage of young adults aged 18–24 years who engaged in binge drinking — Massachusetts, 2001–2005



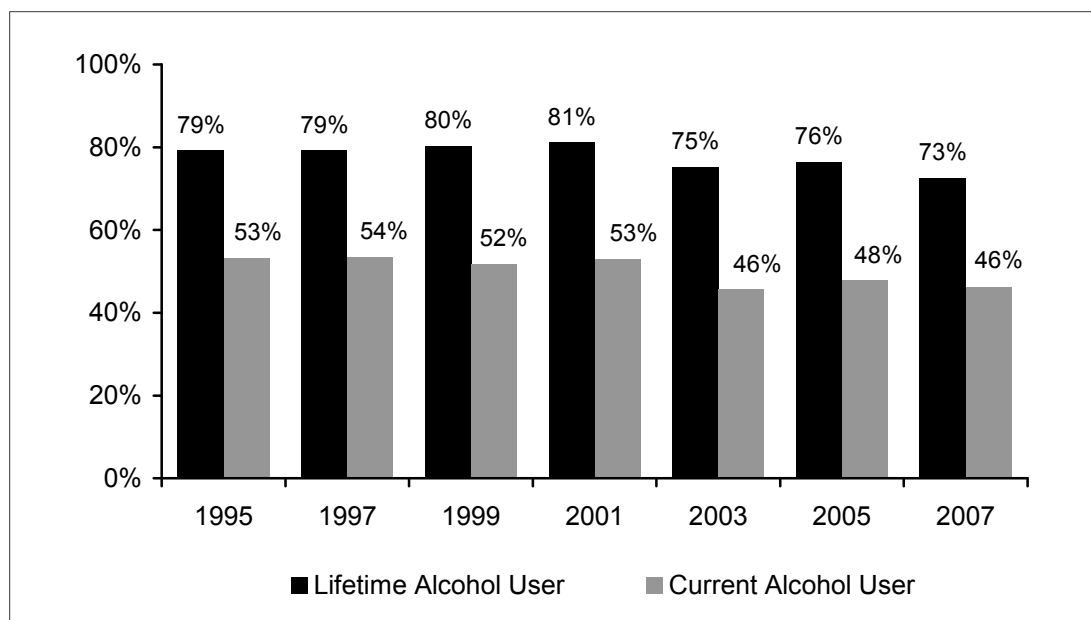
Source: MBRFSS, 2001–2005

Other alcohol use indicators

Recent alcohol use is significantly associated with violence and injury-related risk behaviors including weapon carrying, suicide attempts, and drunk driving, as well as with other illegal drug use (Massachusetts Youth Alcohol Prevention Task Force, 2002).

- The rates of lifetime and recent alcohol use among Massachusetts high school students have decreased slightly since 1995 (Figure 1-10). In 2007, 73% of students had ever consumed alcohol, and 20% of students reported having their first drink prior to age 13 years. Forty-six percent of high school students consumed at least one alcoholic drink in the past 30 days (MYRBS, 2007).
- The rates of lifetime and recent alcohol use among youth with disabilities are substantially higher than their peers without disabilities. In 2007, 38% of middle school youth with disabilities reported having ever drunk alcohol – more than a few sips – and 20% reported recent use compared to 20% and 8% of their non-disabled counterparts. Similarly, high school youth with disabilities were more likely to ever drink alcohol compared with those without disabilities (MYHS, 2007).
- Among young adults aged 18–24 years, the rate of current alcohol consumption decreased from 64% in 1999 to 61% in 2005 (MBRFSS, 2005).

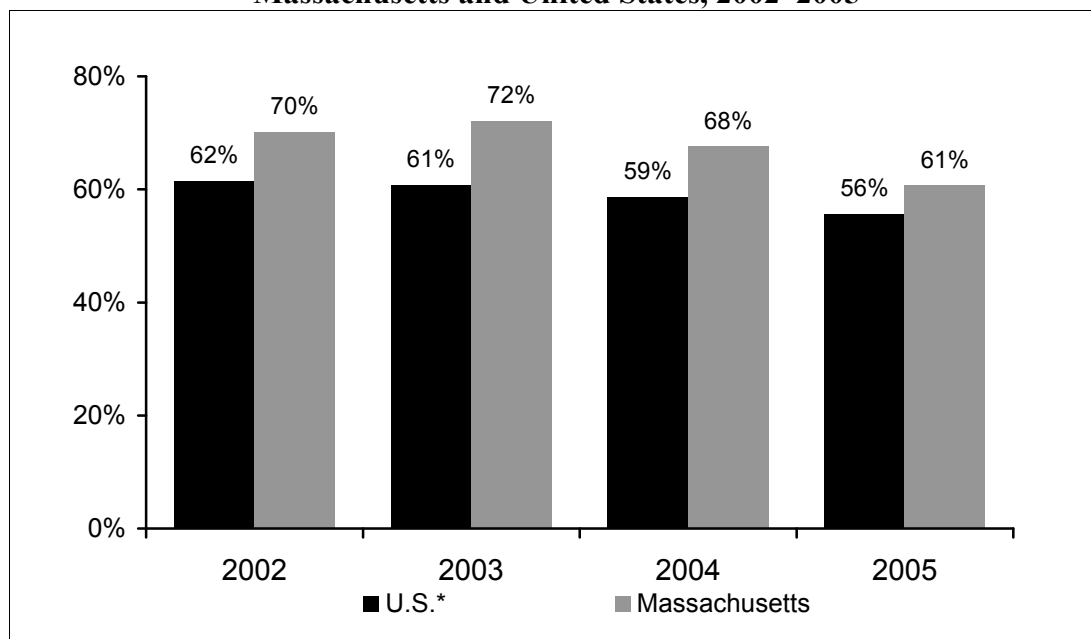
Figure 1-10. Percentage of high school students who are lifetime and current alcohol users — Massachusetts, 1995–2007



Source: MYRBS, 1995–2007

- Among young adults aged 18–24 years in Massachusetts, the rate of current alcohol consumption decreased substantially from 70% in 2002 to 61% in 2005, but still remained higher than the national rate (Figure 1-11) (MBRFSS, 2002–2005; BRFSS 2002–2005).

Figure 1-11. Percentage of young adults aged 18–24 years who are current alcohol users — Massachusetts and United States, 2002–2005



*Source: MBRFSS, 2002–2005; BRFSS, 2002–2005.

*U.S. estimate is the median % nationwide, including all 50 states, DC and the territories.

OTHER DRUG USE

The abuse of illegal drugs in adolescence can have both short-term and long-term health consequences. High school students who use illegal drugs are at greater risk for physical injuries, suicide attempts, unsafe sexual activity, and school failure (MYRBS, 2005; Substance Abuse and Mental Health Services Administration, 1999). For example, heavy marijuana use can impair cognitive functioning, coordination, and learning (Block, 2000; Mathias, 1998).

Healthy People 2010 Adolescent Objective 26-10 b: Reduce past-month use of illicit substances (marijuana).

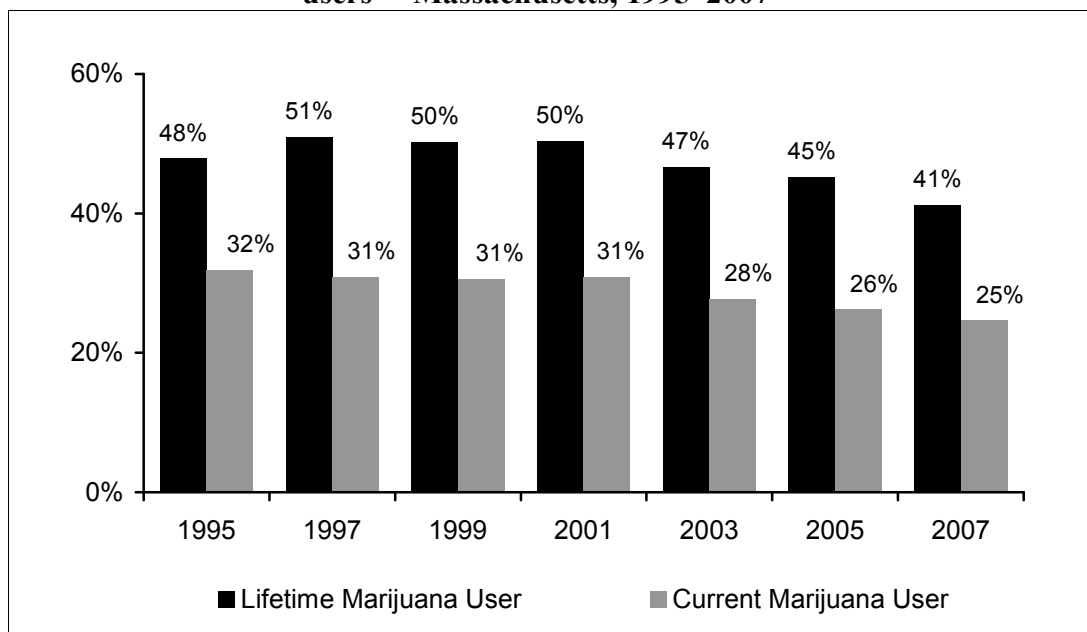
- In 2007, one out of four (25%) high school students in Massachusetts used marijuana in the past 30 days, higher than the U.S. average of 20% (Table 1-4). However, after remaining level from 1995 to 2001, both current and lifetime marijuana use declined from 2003–2007 (Figure 1-12) (MYRBS, 1995–2007).

Table 1-4. Percentage of high school students who used marijuana one or more times in the past 30 days — Massachusetts and United States

Massachusetts, 2005	U.S., 2005	Massachusetts, 2007	HP2010 target
26%	20%	25%	0.7%

Source: MYRBS, 2005, 2007; YRBSS, 2005

Figure 1-12. Percentage of high school students who are lifetime and current marijuana users— Massachusetts, 1995–2007



Source: MYRBS, 1995–2007

- Nationally, in 2005, 16% of young adults aged 18–25 years reported using marijuana in the past 30 days (National Survey on Drug Use and Health, 2005).

EARLY AND RISKY SEXUAL ACTIVITY

Initiation of sexual activity too early can have negative consequences for youth and young adults including teen pregnancy, sexually transmitted diseases, and related future health consequences (Kirby, 2001).

Healthy People 2010 Adolescent Objective 25-11: Increase the proportion of adolescents who abstain from sexual intercourse or use condoms if currently sexually active.

Eighty-seven percent of Massachusetts high school students in 2007 either abstained from sexual intercourse or, if sexually active, used condoms (MYRBS, 2007) (Table 1-5).

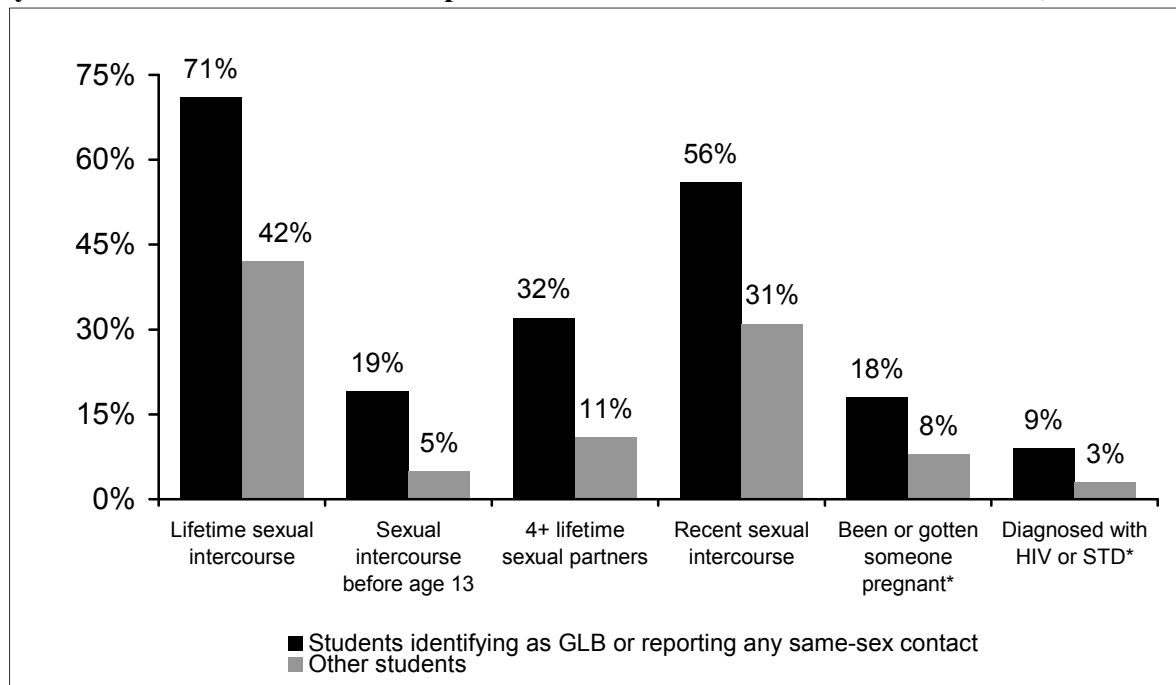
Table 1-5. Percentage of high school students who abstain from sexual intercourse or use condoms if currently sexually active — Massachusetts and United States

Massachusetts, 2005	U.S., 2005	Massachusetts, 2007	HP2010 target
88%	87%	87%	95%

Source: MYRBS, 2005, 2007; YRBSS, 2005

- In 2007, the majority (56%) of Massachusetts high school students reported never having had sexual intercourse. This represents a slight increase from 51% in 1993 (MYRBS, 2007).
- One-third of Massachusetts students are currently sexually active (33%). That is, they report having had intercourse within the past three months (MYRBS, 2007). The proportion of students who are currently sexually active increases with grade level from 17% of 9th grade students to 51% of 12th grade students. Thirty-eight percent of Hispanic students and 36% of Black students are sexually active versus 31% of White students and 26% of Asian students (MYRBS, 2007).
- Sixty-one percent of currently sexually active students used a condom the last time they had sexual intercourse. In 2007, 63% of currently sexually active males reported condom use at last intercourse, a decrease from 72% in 2005. Fifty-nine percent of currently sexually active females reported condom use at last sex in both 2005 and 2007. Condom use at last intercourse decreases with increasing grade level from 69% in 9th grade to 56% in 12th grade. Among students who had had sexual intercourse in the past three months, 62% of White, 62% of Black, 56% of Hispanic and 55% of Asian youth reported condom use at last intercourse (MYRBS, 2007).
- Nine percent of high school students identified as gay, lesbian or bisexual, or reported any lifetime same-sex sexual contact. Over half (56%) of them reported being currently sexually active, and a greater proportion reported risky sexual behavior than other students (Figure 1-13).

Figure 1-13. Sexual behavior of students identifying as gay, lesbian or bisexual or reporting any lifetime same-sex contact compared with other students — Massachusetts, 2007



Source: MYRBS, 2007

* Among students who had ever had sexual intercourse

TEEN PREGNANCY

Teen pregnancy has negative consequences for teens, children of teen parents, families, and communities (Kirby, 2001). Children of teen parents have poorer health and educational outcomes, and are more likely to become teen parents themselves (Maynard, 1997).

Healthy People 2010 Adolescent Objective 09-07: Reduce pregnancies among adolescent females.

In 2006, the teen birth rate in Massachusetts was 21.3 per 1,000 women aged 15 to 19 years, almost 50% lower than the projected national estimate (Table 1-6) (MDPH, 2008; CDC, NVSS, 2007). Massachusetts has the 3rd lowest teen birth rate in the U.S. (National Campaign to Prevent Teen Pregnancy, 2007).

Table 1-6. Birth rate* for women, aged 15–19 years — Massachusetts and United States, 2006

Massachusetts	U.S.	HP2010 target
21.3	41.9 [†]	**

*Number of live births per 1,000 women, aged 15–19 years.

[†] Projected rate.

**Because the HP2010 target is based on pregnancy rate, not birth rate, it is not comparable.

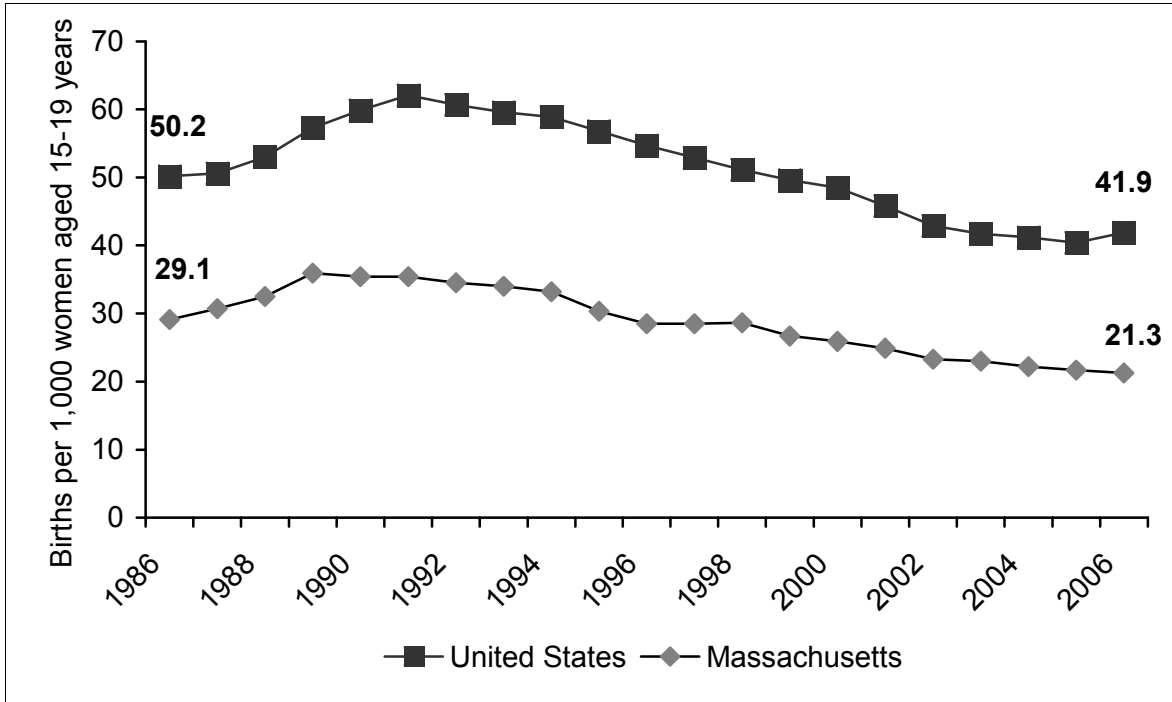
- The teen birth rate in Massachusetts declined 25% between 1996 and 2006, dropping from 28.5 to 21.3 births per 1,000 women aged 15–19 years. The national teen birth rate declined 23% during the same period (Figure 1-14).
- Despite the overall low teen birth rate, Massachusetts has four communities with teen birth rates well above the national average. Holyoke (94.8 per 1,000), Springfield (80.7 per 1,000), Lawrence (80.6 per 1,000), and Chelsea (79.0 per 1,000) had the highest birth rates for youth aged 15–19 years in Massachusetts in 2006 (MDPH, 2008).
- There is also substantial racial/ethnic disparity among teen birth rates, with the highest rate (for Hispanic teens, 72.7 per 1,000) being more than six times the lowest rate (for White teens, 12.5 per 1,000) (Figure 1-15) (MDPH, 2008).

Teen Pregnancy Prevention Initiatives

From 1996–2003, Massachusetts concentrated teen pregnancy prevention efforts on the community-based coalition model, the Teen Challenge Fund. This model provided funding to communities for the establishment of community-based coalitions addressing teen pregnancy, youth development, and other related youth-health risk behaviors. The mission was to unite youth, families, and community leaders in the development of local prevention strategies that promote healthy behaviors, responsible decision-making, and increased economic, social, and educational opportunities for youth aged 10–19 years. Seventeen of the Commonwealth's most vulnerable and challenged communities formed diverse coalitions, funded subcontractor programs, and worked directly with youth and families to address teen pregnancy. Funding for the Teen Challenge Fund was cut in 2004.

The publication of new research on effective public health program models to prevent teen pregnancy offered Massachusetts communities the opportunity to test these new models. Since 2003, Massachusetts has been funding science-based teen pregnancy prevention programs in various communities. These programs closely examine the root causes of teen pregnancy and other youth sexual health risk-taking behavior, and use scientific evidence to support the implementation of specific models to address priority populations. Models include Making Proud Choices, Teen Outreach Program, California's Adolescent Sibling Pregnancy Prevention Program, Focus on Kids and Poder Latino. There are currently 20 communities utilizing science-based approaches.

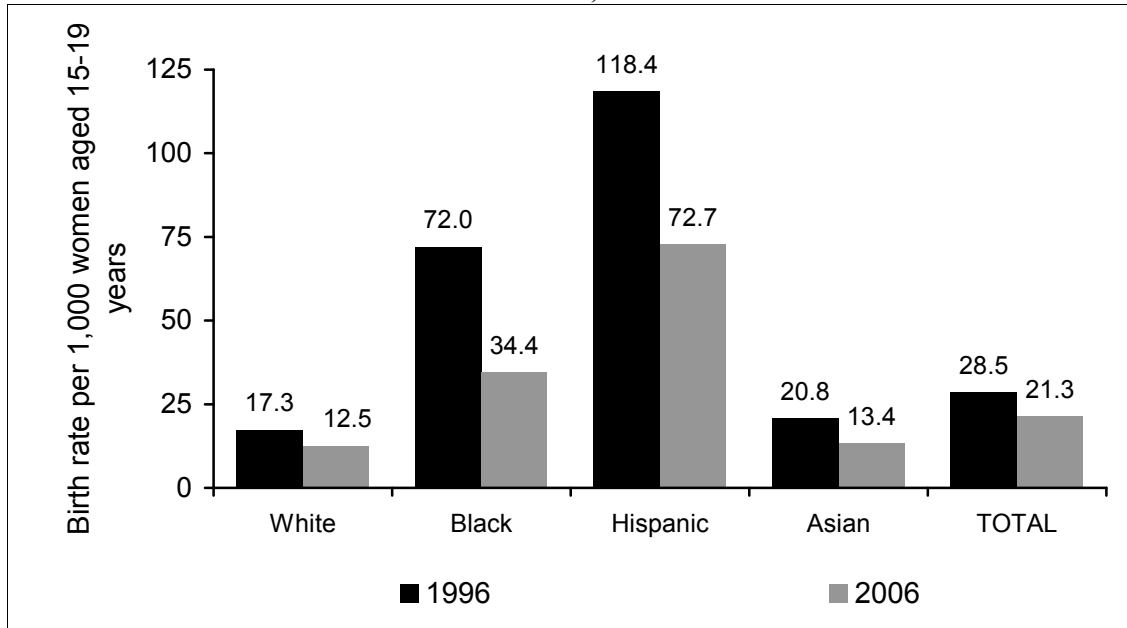
**Figure 1-14. Trend in teen birth rates* —
Massachusetts and the United States, 1986–2006**



Source: *Massachusetts Births 2006*, released February 2008.

* Teen birth rate is the number of births to women aged 15–19 years per 1,000 women.

**Figure 1-15. Teen birth rate* by maternal race/ethnicity —
Massachusetts, 1996–2006**



Source: *Massachusetts Births 2006*, released February 2008.

* Teen birth rate is the number of births to women aged 15–19 years per 1,000 women aged 15–19 years.

- In 2003, a total of 12,541 abortions were performed on women aged less than 25 years; 101 among women aged less than 15 years, 4,454 aged 15–19 years, and 7,986 aged 20–24 years. Young women aged 20–24 years account for 31% of all abortions performed in Massachusetts and for 63% of all abortions for women under age 25 years (CDC, 2006).
- According to the Alan Guttmacher Institute, in 2000 there were 50 abortions per 100 pregnancies ending in abortion or live birth among Massachusetts females aged 15–19 years compared to the national ratio of 33.4 abortions per 100 pregnancies ending in abortion or live birth among females aged 15–19 years. (AGI, 2006).

OTHER TEEN PREGNANCY INDICATORS

- In 2006, only 70% of mothers aged <20 years received adequate prenatal care compared with 83% of older mothers (MDPH, 2008).
- In 2006, the percentage of births that were low birth weight (<2500 grams) was higher among births to teens than among births to older mothers (9.5% v. 7.8%). Thirteen percent of teen mothers reported smoking during pregnancy compared with 7% of older mothers (MDPH, 2008).
- Among high school females who had ever had sexual intercourse, 11% reported ever having been pregnant. Among sexually experienced females, the percentage of reported pregnancy was highest among Black students (14%) compared to all other racial/ethnic groups (MYRBS, 2007).
- Among high school students with any history of sexual activity, youth who identified as gay, lesbian or bisexual, or who reported any lifetime same-sex sexual contact were more likely than their peers to report having ever been or gotten someone pregnant (18% vs. 6%) (MYRBS, 2007).

SEXUALLY TRANSMITTED DISEASES (STDs)

STDs in Adolescents and Young Adults

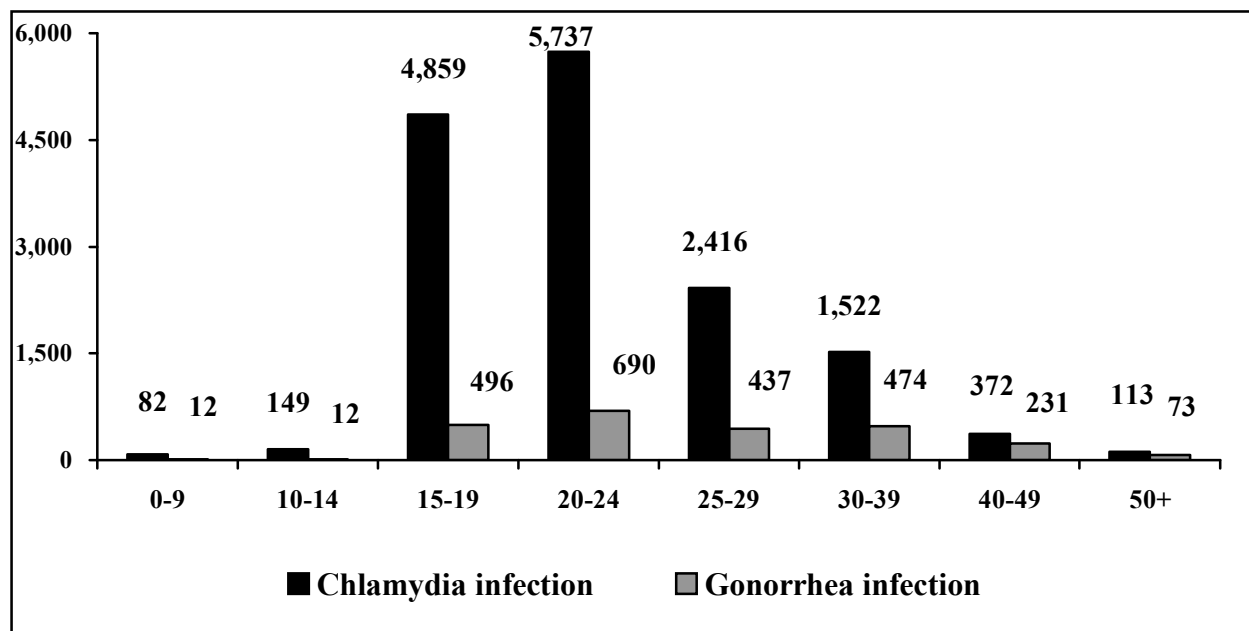
- Compared to older adults, sexually active adolescents (aged 15–19 years) and young adults (aged 20–24 years) are at higher risk for acquiring STDs. This higher risk is due to a combination of behavioral, biological and cultural factors.
- In addition to high-risk sexual behaviors, the higher prevalence of STDs among adolescents often reflects multiple barriers to quality STD prevention services, including lack of insurance or other ability to pay, lack of transportation, discomfort with facilities and services designed for adults, and concerns about confidentiality.

Reported Cases of Chlamydia Infection and Gonorrhea in Adolescents and Young Adults

The majority of reported chlamydia infections and gonorrhea cases in Massachusetts are in adolescents and young adults.

- Of the 15,367 cases of chlamydia infection reported in 2006, 4,859 (32%) were in youth aged 15–19 years and 5,737 (37%) were in those aged 20–24 years (Figure 1-16).
- Of the 2,440 cases of gonorrhea reported in 2006, 496 (20%) were in youth aged 15–19 years and 690 (28%) were in those aged 20–24 years.

Figure 1-16. Number of reported chlamydia infections and gonorrhea cases by age — Massachusetts, 2006



Source: MDPH, BCDC

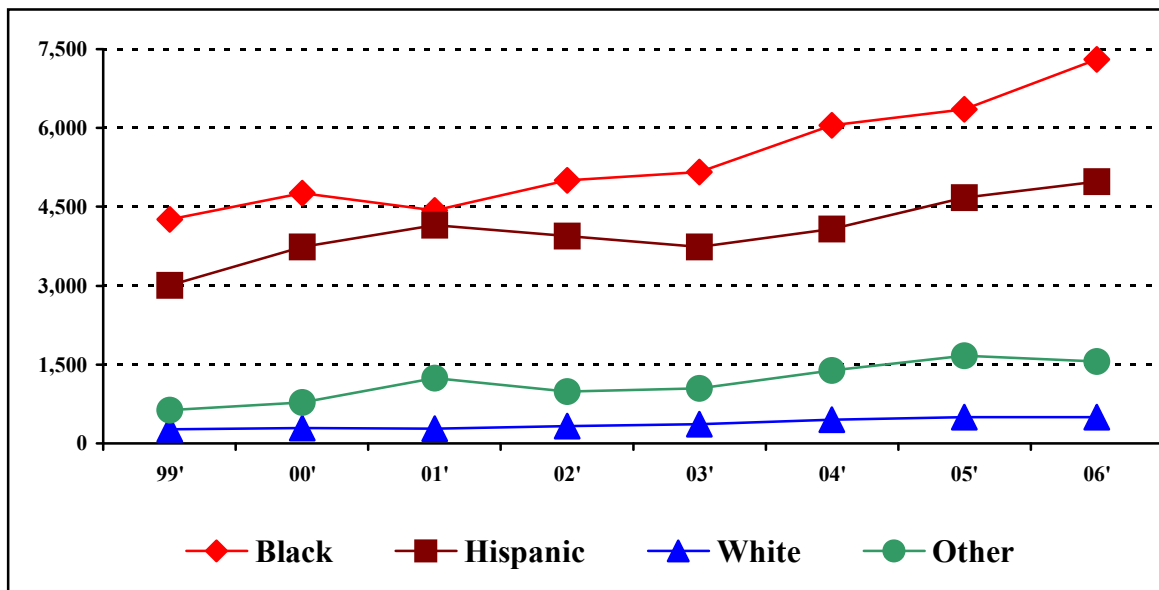
Racial/Ethnic Disparities in STD Rates in Adolescents and Young Adults

Dramatic racial/ethnic differences in STD rates exist among adolescents and young adults in Massachusetts. The reasons for these racial and ethnic differences are unclear and complex. Possible explanations for these differences include socioeconomic status, variability in access to and utilization of health care and screening, reporting differences, differences in sexual behavior, and varying risk of STDs among sexual networks.

- Among persons aged 15–24 years, when compared to Whites, the rate of reported chlamydia infection was 15 times higher in Blacks and 10 times higher in Hispanics (MDPH, BCDC) (Figure 1-17).

Since chlamydia infection is often asymptomatic and diagnosis is dependent on laboratory testing, increased screening for chlamydia infection is one cause of increased reports of cases. Periodic screening is now recommended for all sexually active young women and successful implementation of these screening recommendations leads to increases in reported cases.

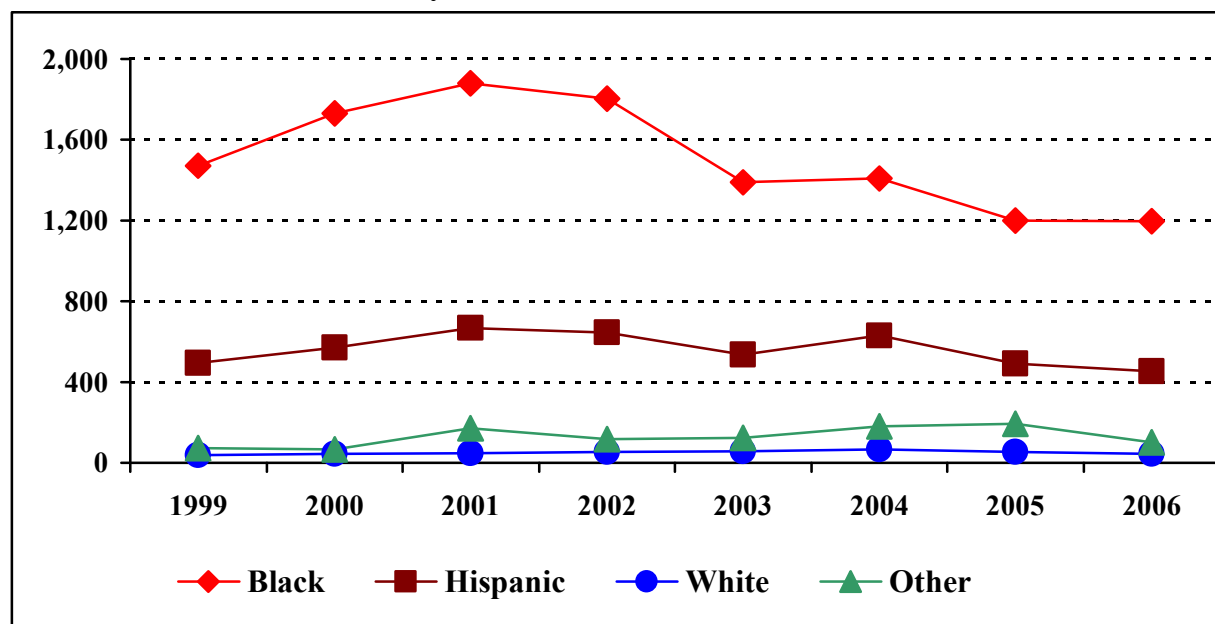
Figure 1-17. Reported number of chlamydia infections by race/ethnicity among youth aged 15–24 years — Massachusetts, 1999–2006



Source: MDPH, BCDC

- Similarly for gonorrhea, when compared to Whites, the rate is 28 times higher for Blacks, and 10 times higher for Hispanics (Figure 1-18).

Figure 1-18. Reported number of gonorrhea infections by race/ethnicity among youth aged 15–24 years — Massachusetts, 1999–2006



Source: MDPH, BCDC

HIV/AIDS

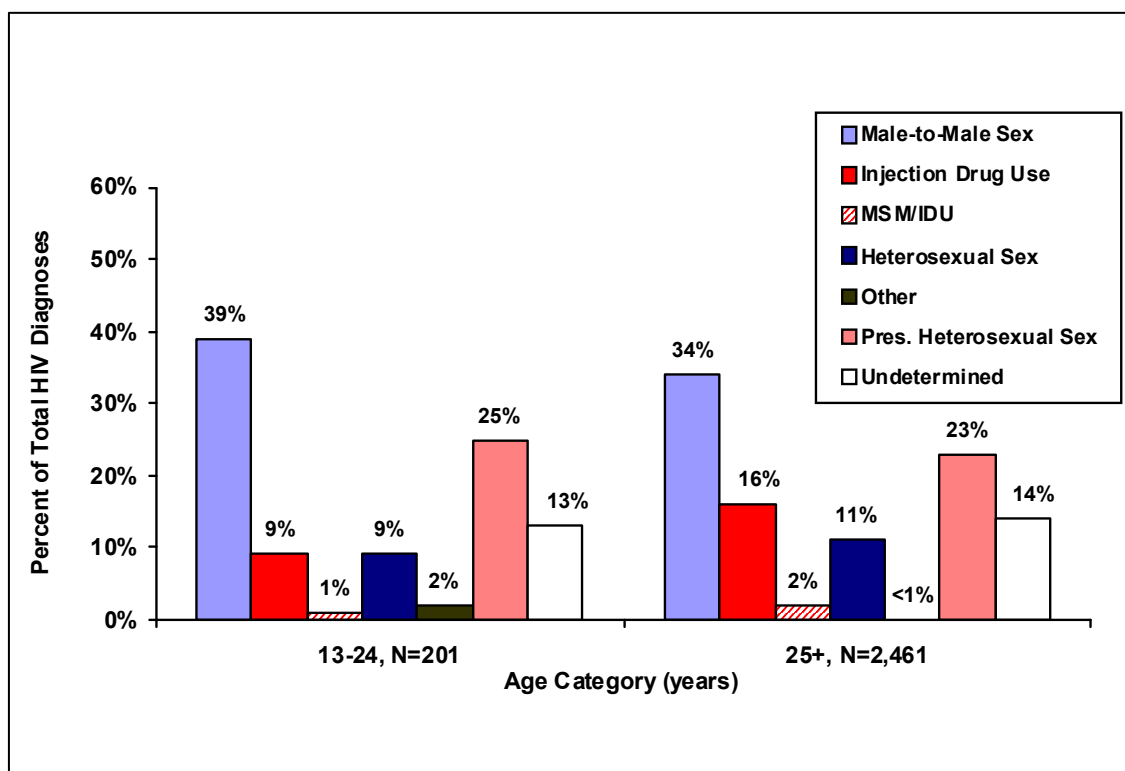
Nationally, the Centers for Disease Control and Prevention (CDC) estimates that 13% of new HIV diagnoses in 2004 were among youth aged 13–24 years (CDC, 2008). In Massachusetts, youth aged 13–24 years consistently comprised 7–8% of annual HIV diagnoses from 2003–2005; among people living with HIV/AIDS as of December 31, 2005, 402 (3%) were aged 13–24 years, reflecting both recently diagnosed youth and historically perinatally infected children who are now youth.

Massachusetts data reflect youth trends seen at the national level, with the burden of new HIV diagnoses found among young men who have sex with men and youth of color.

WHO IS BEING DIAGNOSED WITH HIV?

- During 2003–2005, 201 youth aged 13–24 years were diagnosed with HIV infection (MDPH, HIV/AIDS Surveillance Program, 2007) (Figure 1-19). These infections were most likely to be reported among men who have sex with men (39%), with persons aged 20–24 years reporting male-to-male sex as a risk exposure more than persons aged 13–19 years (41% compared to 30%). Overall, a higher proportion of youth aged 13–24 years diagnosed with HIV infection from 2003–2005 reported a risk of male-to-male sex as compared to those aged 25 years and older (39% compared to 34%).

Figure 1-19. Persons diagnosed with HIV infection by age at diagnosis and mode of exposure — Massachusetts, 2003–2005



Source: MDPH HIV/AIDS Surveillance Program, Data as of 7/1/06 (percentages may not add up to 100% due to rounding).

- One in four (25%) youth aged 13–24 years diagnosed with HIV infection from 2003–2005 reported an exposure through heterosexual sex with a partner of unknown risk or HIV status (presumed heterosexual sex). However, youth aged 13–19 years were more likely to report an exposure through presumed heterosexual sex than those aged 20–24 years (32% compared to 23%).
- Although males represented nearly three times more HIV infections among people aged 25 years and older diagnosed during 2003–2005, this gap decreased as age decreased. Specifically, the ratio of males to females was 3:2 for youth aged 13–24 years and equalized to 1:1 among youth aged 13–19 years.
- Seventy percent of youth diagnosed with HIV infection from 2003–2005 were Black or Hispanic. 44% were Black, non-Hispanic and 26% were Hispanic. (Table 1-7). By comparison, cases among Black, non-Hispanic and Hispanic persons accounted for approximately half of new HIV diagnoses among individuals aged 25 years and older during 2003–2005.

Table 1-7. Persons diagnosed with HIV infection, age at diagnosis by gender and race/ethnicity — Massachusetts, 2003–2005¹

	13–19		Age at HIV Diagnosis (years)				25+	
	N	%	N	%	N	%	N	%
Gender								
Male	19	51	101	62	120	60	1,767	72
Female	18	49	63	38	81	40	694	28
Race								
White NH	6	16	47	29	53	26	990	40
Black NH	25	68	63	38	88	44	777	32
Hispanic	5	14	48	29	53	26	620	25
API	0	0	4	2	4	2	40	2
AI/AN	0	0	0	0	0	0	3	0
Unknown	1	3	2	1	3	1	31	1
Total	37	100%	164	100%	201	100%	2,461	100%

¹ Reflects year of HIV diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis
Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding); data as of 7/1/06

WHO IS LIVING WITH HIV/AIDS?

- As of December 31, 2005, there were 402 youth aged 13–24 years living with HIV/AIDS in Massachusetts (MDPH, HIV/AIDS Surveillance Program, 2007) (Table 1-8). Ten percent (1,504) of all persons living with HIV/AIDS were diagnosed with HIV infection when they were aged 13–24 years, and 2% were diagnosed prior to age 13 years. Most of those are now teens or young adults (MDPH HIV/AIDS Bureau, 2007).

- Almost half (44%) of youth aged 13–24 years and 88% of youth aged 13–19 years living with HIV/AIDS were exposed to HIV perinatally, representing the process of “aging out” of the pediatric category (MDPH HIV/AIDS Bureau, 2007).
- The most commonly reported non-perinatal exposure among youth living with HIV/AIDS was male-to-male sex (21%), followed by reported exposure through heterosexual sex with a partner of unknown risk or HIV status (presumed heterosexual sex, 15%). However, the categories of heterosexual or presumed heterosexual sex combined accounted for 23% of youth aged 13–24 years living with HIV (MDPH HIV/AIDS Bureau, 2007).
- Roughly 3 of every 4 youth aged 13–24 years living with HIV/AIDS were Black or Hispanic. 39% were Black, non-Hispanic and 34% were Hispanic. Black non-Hispanic and Hispanic youth were represented at much higher levels than among those aged 25 years and older, where Black non-Hispanic and Hispanic people accounted for approximately half of those living with HIV/AIDS.
- Males comprised a larger proportion of youth aged 13–24 years living with HIV/AIDS than females, 55% compared to 45%, however, a much higher proportion of youth aged 13–24 years living with HIV/AIDS were female compared to those aged 25 years and older (45% compared to 28%).

Table 1-8. Persons living with HIV/AIDS, age on December 31, 2005, by gender and race/ethnicity — Massachusetts

	Age on December 31, 2005 (years)							
	13–19		20–24		13–24		25+	
	N	%	N	%	N	%	N	%
Gender								
Male	92	54	131	56	223	55	11,096	72
Female	77	46	102	44	179	45	4,375	28
Race								
White NH	37	22	67	37	104	26	7,123	46
Black NH	73	43	82	73	155	39	4,230	27
Hispanic	57	34	80	57	137	34	3,806	25
API	1	1	2	1	3	1	191	1
AI/AN	0	0	0	0	0	0	22	<1
Unknown	1	1	2	1	3	1	99	1
Total	169	100%	233	169	402	100%	15,471	100%

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding); data as of 7/1/06

For more information and detailed data tables, please visit www.mass.gov/dph/aids.

RISK BEHAVIORS: OTHER HIV/AIDS-RELATED INDICATORS

- In 2007, 3% of high school students reported ever having used a needle to inject an illegal drug (MYRBS, 2007).

- Among youth reporting sexual intercourse in the past 3 months, 61% used a condom at last sexual intercourse, an increase from 52% in 1993 (MYRBS, 1993, 2007).
- Twelve percent of youth reported four or more lifetime sexual intercourse partners (MYRBS, 2007).
- Twenty-five percent of MYRBS respondents used alcohol or drugs the last time they had sexual intercourse (MYRBS, 2007).

OTHER COMMUNICABLE DISEASES

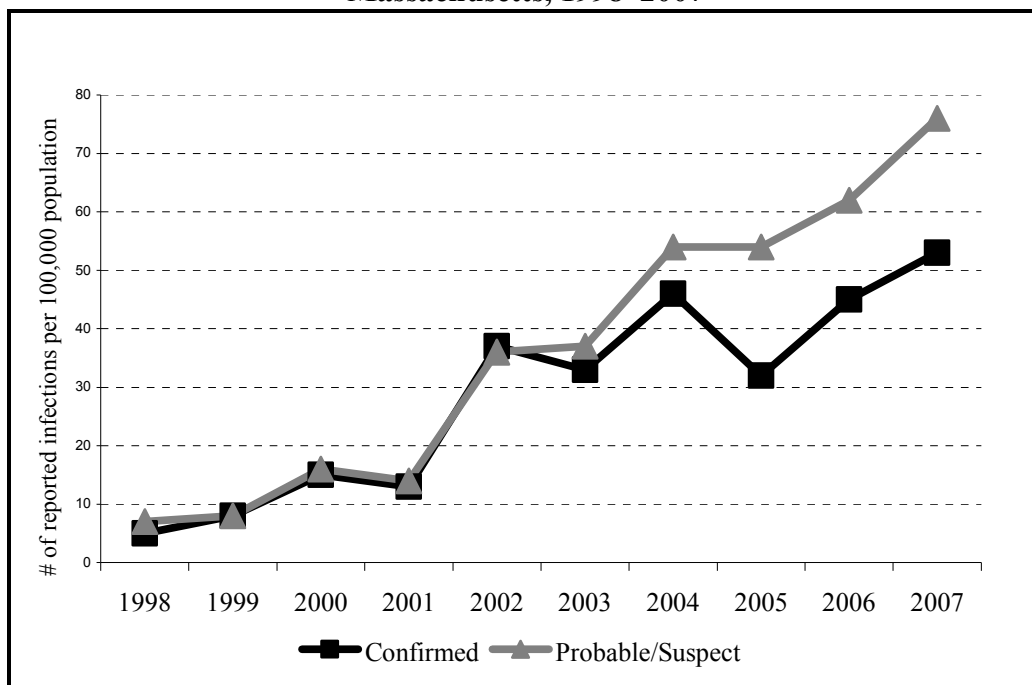
Children, adolescents and young adults may be at higher risk of acquiring certain communicable diseases. Examples of these are hepatitis C, Lyme disease, meningococcal disease and methicillin-resistant *Staphylococcus aureus* (MRSA) infection.

Hepatitis C

Massachusetts hepatitis C surveillance data have shown a trend of increasing diagnoses of hepatitis C virus (HCV) infection in youth and young adults aged 15–25 years. From 1998 to 2007, newly diagnosed, confirmed cases of HCV infection reported in this age group have risen from 5 to 53 cases per 100,000 population (Figure 1-20). In the same time period, the incidence of newly diagnosed HCV infections in all age groups combined has decreased. While this represents positive tests in those who had reason to be tested and not routine screening or new infections *per se*, given the ages of these individuals, it is likely that their HCV infections were recent. This increase is not specific to one geographic location within the state. Current data are not sufficient to explore disparities in diagnosis among different racial or ethnic groups.

MDPH has initiated enhanced surveillance for hepatitis C in youth and young adults to better understand the nature of this trend and to ensure appropriate services are provided. MDPH is developing educational materials specifically targeted to this age group and will be collaborating with drug treatment facilities serving youth to reach those at immediate risk.

Figure 1-20. Incidence rates of HCV infection in residents aged 15–25 years — Massachusetts, 1998–2007



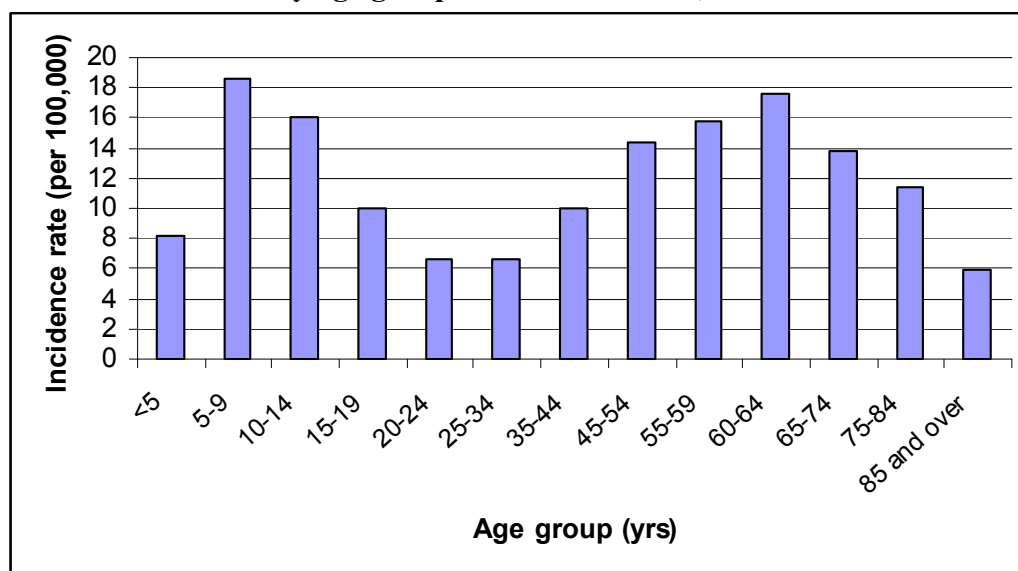
Source: MDPH, BCDC.

Lyme Disease

Youth and young adults are at high risk for exposure to ticks and the agent of Lyme disease, in part because of a disproportionate amount of time spent outdoors. Preventing and reducing exposure to the deer tick, which spreads Lyme disease to people, and prompt recognition of the disease can reduce the chances that a person will become infected and go on to develop more serious complications of the disease.

- In 2000, Massachusetts had the 7th highest rate of reported Lyme disease in the United States. In 2005, the Massachusetts rate was 36.5 cases per 100,000 population, the 4th highest in the country. The national average was 7.9 cases per 100,000 population (CDC, 2005).
- In addition to having a high overall rate, age-specific incidence rates in Massachusetts children are approximately 1.5 times higher than the national average. For instance, the incidence rates among youth aged 10–14 years (16.1 per 100,000), 15–19 years (10.1 per 100,000) and 20–24 years (6.7 per 100,000) are all substantially greater than the corresponding national age-specific incidence rates; 8.0, 6.0 and 4.7 per 100,000, respectively (CDC, 2004) (Figure 1-21).

Figure 1-21. Average incidence rate (per 100,000 population) of reported Lyme disease cases by age group — Massachusetts, 1990–2005



Source: MDPH, BCDC.

Methicillin-resistant *Staphylococcus aureus* (MRSA)

MRSA bacteria are *Staphylococcus aureus* bacteria that are not sensitive to commonly used antibiotics. Like other *Staphylococcus* they can live on the surface of the skin and in the nose and throat of people without causing a health concern. MRSA can also cause infections in healthy young people such as skin and soft-tissue infections such as pimples, boils, and rashes, as well as invasive infections, which can be very serious, especially if the infection is not identified as MRSA and treated with antibiotics that are effective against MRSA. MRSA has been a serious health problem for many years in hospitals and long-term care facilities, where patients may be more vulnerable to infection.

MRSA is spread by direct skin-to-skin contact and by direct contact with contaminated shared items like towels, sports equipment and gym equipment. Clusters of MRSA infection have been associated with participation on some team sports like football and wrestling due to the high degree of skin cuts and abrasions, direct skin-to-skin contact, and sharing of uniforms, pads, and towels (CDC MMWR, 2003). Clusters of MRSA have also been documented in pre-schools and jails/prisons, due to factors that include crowding, compromised skin integrity, direct skin-to-skin contact, contaminated surfaces and shared items, and lack of cleanliness.

MDPH initiated an educational campaign about appropriate antibiotic use during the spring of 2005, with an emphasis on materials concerning the prevention and treatment of MRSA infections. As the result of this campaign, Massachusetts developed an antibiotic resistance web page containing general information on antimicrobial resistance, as well as several pages about [MRSA](#), for health care providers, school nurses, coaches and athletic directors, and corrections health staff. In addition, a [general fact sheet](#) about MRSA, a fact sheet for [patients with MRSA](#) skin infections, and a fact sheet about skin infections for [parents and students](#) were developed.

Many of these fact sheets were translated into Spanish, Portuguese, Chinese, Vietnamese, and French. Five posters were initially created during this campaign, focusing on skin care for athletes in high school and college. These posters were co-branded by the Centers for Disease Control and Prevention.

MRSA materials are posted on the MDPH web site and can be found at www.mass.gov/dph/epi.

In November 2007, following increased media attention to MRSA in school-aged youth, there were 29,218 hits on the “About MRSA” web page, 16,798 hits on the “MRSA and School Health” page, and 6,903 hits on the “MRSA and School Athletics” page. During this period of increased media attention and anxiety among parents, students, coaches and teachers, MDPH developed and distributed a “Frequently Asked Questions for Parents and Students about MRSA” that was widely distributed to teachers and school nurses. MDPH sent Public Health Guidance letters to Massachusetts school nurses and school superintendents, emphasizing that “although severe, life-threatening infections caused by *Staphylococcus aureus* (staph) can be dramatic and frightening, they are rare” and “severe staph infections are uncommon in healthy children.” At least 45 educational MRSA presentations were given to school nurses, local public health, health care providers, and other audiences during the fall of 2007 and winter 2008.

IMMUNIZATION

Vaccines were among the greatest public health achievements of the 20th century. Immunization prevents disability and death from infectious diseases for individuals and helps control the spread of infections within communities (*Healthy People 2010*). While there are no adolescent critical objectives for this leading health indicator, there are several specific objectives related to youth.

- Massachusetts has met or exceeded the *Healthy People 2010* goals for 7th graders for coverage with hepatitis B vaccine (goal: 90%) and 2 or more doses of measles, mumps and rubella (MMR) vaccine (goal: 90%) (Table 1-9).

**Table 1-9. Percentage of students entering 7th grade with completed immunization series —
— Massachusetts, 2005–2006**

No. of students entering 7 th graders	More than 1 Measles, Mumps, and Rubella Vaccination	Hepatitis B series completed	Varicella (chickenpox) vaccination	Immunity to varicella (chickenpox)	Tetanus and diphtheria booster
82,144	99%	98%	43%	96%	84%

Source: MDPH Immunization Program, 2005–2006

THREE NEW VACCINES TO PROTECT AGAINST DISEASES IN ADOLESCENTS

Illness and disability caused by vaccine-preventable diseases - including pertussis (whooping cough), and meningococcal meningitis, continue among youth. Human papilloma virus infection is acquired through sexual contact and can lead to cervical and other cancers later in life.

Pertussis

- Pertussis continues to be prevalent in Massachusetts, with over 1,000–2,000 cases reported in the state for each of the past 4 years; >90% of total cases occur in persons aged 11 years and older (Table 1-10).
- The newly licensed vaccine, Tdap (tetanus, diphtheria and pertussis), is now available for adolescents and adults. It is hoped that the new vaccine will significantly reduce the burden of disease among adolescents (a group that serves as a reservoir of illness for young infants, who have the highest mortality rate from this disease). Massachusetts is currently able to supply Tdap for all youth aged 11–12 years, and for those aged 13–18 years who have not had a recent dose of Td.

**Table 1-10. Number and incidence of reported cases of pertussis —
Massachusetts, 2002–2005**

	2002	2003	2004	2005
Pertussis				
All ages	602	1668	1713	1232
Youth aged 11–19 yrs	374	1088	926	565
Youth incidence (per 100,000)	50	144	122	75

Source: MDPH, BCDC. Data as of 4/27/2007

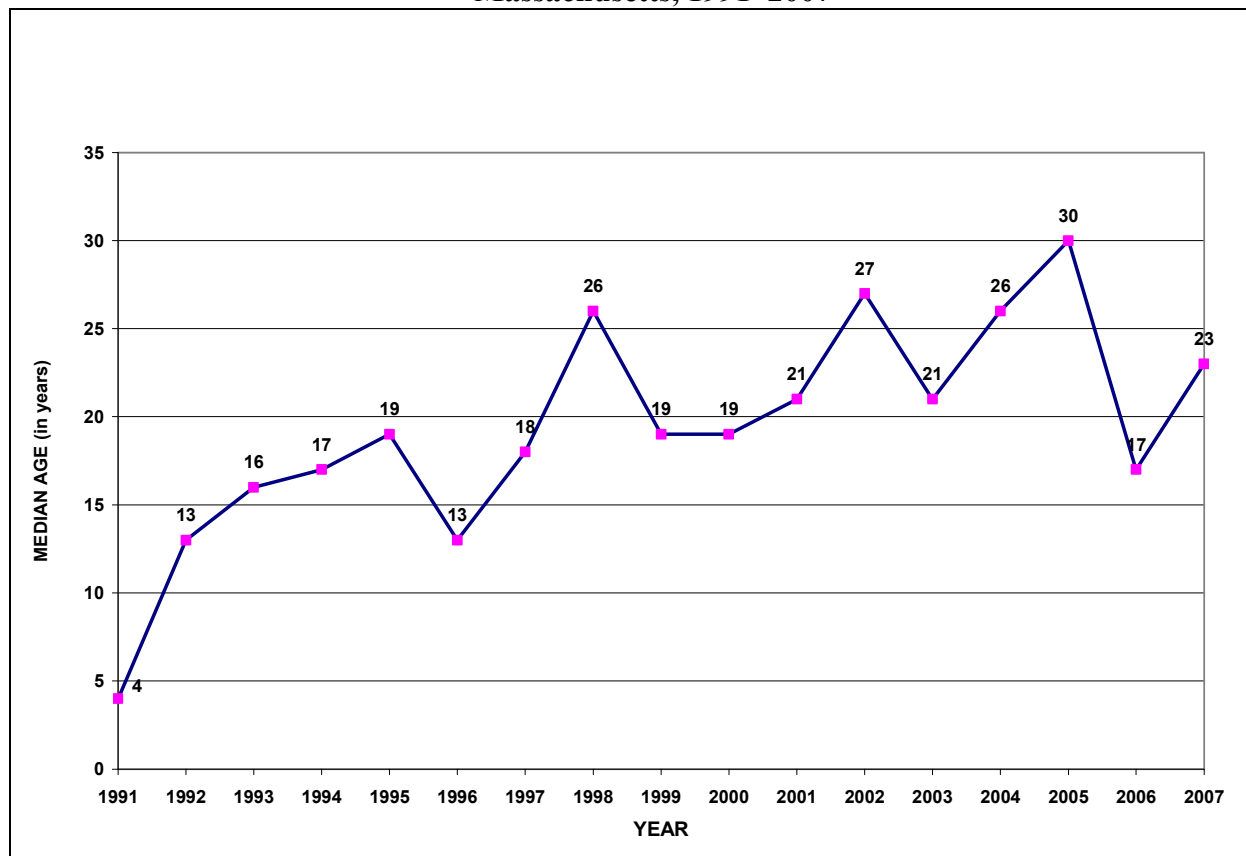
Meningococcal Disease

Invasive Meningococcal Disease

Invasive infections, including bacterial meningitis caused by the organism *Neisseria meningitidis*, can impact people of all ages. However, this organism affects infants, adolescents and young adults disproportionately. The bacteria that cause meningococcal disease are spread through saliva during kissing, sharing food, drinks or cigarettes, and by having close contact with infected people who are sneezing or coughing. Children, adolescents and young adults spread these bacteria more easily because of their activities and behaviors.

- In Massachusetts, between 50 and 100 confirmed cases of meningococcal disease were typically reported each year, although in the last few years, annual case counts have dropped below these expected levels. These data are consistent with a national trend showing a decrease in annual incidence of invasive meningococcal disease.
- The 2007 incidence rate of invasive meningococcal disease in Massachusetts was 0.33 cases per 100,000 people. Figure 1-22 shows the median age of confirmed cases of invasive meningococcal disease in Massachusetts since 1991. The median age was 23 years in 2007.
- While the incidence of meningococcal disease is relatively low, the proportion of meningococcal disease among adolescents and young adults has increased in recent years, and the rate of invasive disease among persons aged 17–20 years is approximately twice that of the overall U.S. population.

Figure 1-22. Median Age of Reported Cases of Confirmed Invasive Meningococcal Disease — Massachusetts, 1991–2007



Source: MDPH, BCDC.

A meningococcal conjugate vaccine (MCV) was licensed in 2005 and protects against 4 serotypes, including 2 that are the cause of 39% of the cases in persons aged 18–34 years. This vaccine is routinely recommended for all children aged 11–12 years, for unvaccinated children aged 13–18 years, and for all college freshmen living in dormitories and others in certain high risk groups.

Human Papillomavirus Infection

The other new vaccine for the adolescent is human papillomavirus (HPV) vaccine, which is licensed for use in females aged 9–26 years. There are over 100 types of HPV, with over 30 types associated with sexual transmission, among which are 14 that are associated with cancer. An estimated 110,000–130,000 new infections occur each year in Massachusetts, and HPV infection is very common among adolescents and young adults, with a prevalence among sexually-active adolescent girls as high as 64%. The quadrivalent vaccine provides protection against serotypes 6 and 11 which cause genital warts, as well as serotypes 16 and 18 which account for 70% of all cervical cancers. Vaccine clinical trials have demonstrated that the HPV vaccine is up to 100% effective in preventing infection due to vaccine strains and the resultant cervical abnormalities.

- Currently, Massachusetts is only able to supply HPV and meningococcal vaccines for children through age 18 years who qualify for the federal entitlement program, Vaccines for Children (VFC). VFC-eligible children include those aged less than 19 years who are enrolled in Medicaid, without health insurance, American Indian or Alaskan Native, or those seen at a federally qualified community health center.
- For remaining children, the HPV and meningococcal vaccines may be reimbursable by private health insurance.

The challenges of an increasingly more complicated immunization schedule and the provision of all the newly recommended vaccines require constant attention on the part of health care provider, school health and parents. Efforts must be made to ensure that youth complete their primary series of immunizations, and that adolescents continue to receive routine healthcare, including all of the recommended vaccines.

MENTAL HEALTH

SUICIDE

Healthy People 2010 Adolescent Objective 18-01: Reduce the suicide rate.

For the years 2004–2006, the average annual suicide rate for youth aged 15–24 years was 5.5 per 100,000 residents in the age group (Table 1-11). In each age group, the suicide rate in Massachusetts was substantially below the national average.

- In 2006, suicide was the cause of 9.1% of all deaths (n=43 suicides) among youth aged 15–24 years and was the third leading cause of death after unintentional injury and homicide (MDPH, Registry of Vital Records and Statistics, 2008).

Table 1-11. Suicide rate*, by age group — Massachusetts (2004–2006) and United States (2005)

Age Group	Massachusetts average annual rate (2004–2006)	U.S. rate (2005)	HP2010 target
15–19 years	3.6	7.7	**
20–24 years	7.5	12.4	**
15–24 years	5.5	10.0	**

*Deaths per 100,000 population in each age group.

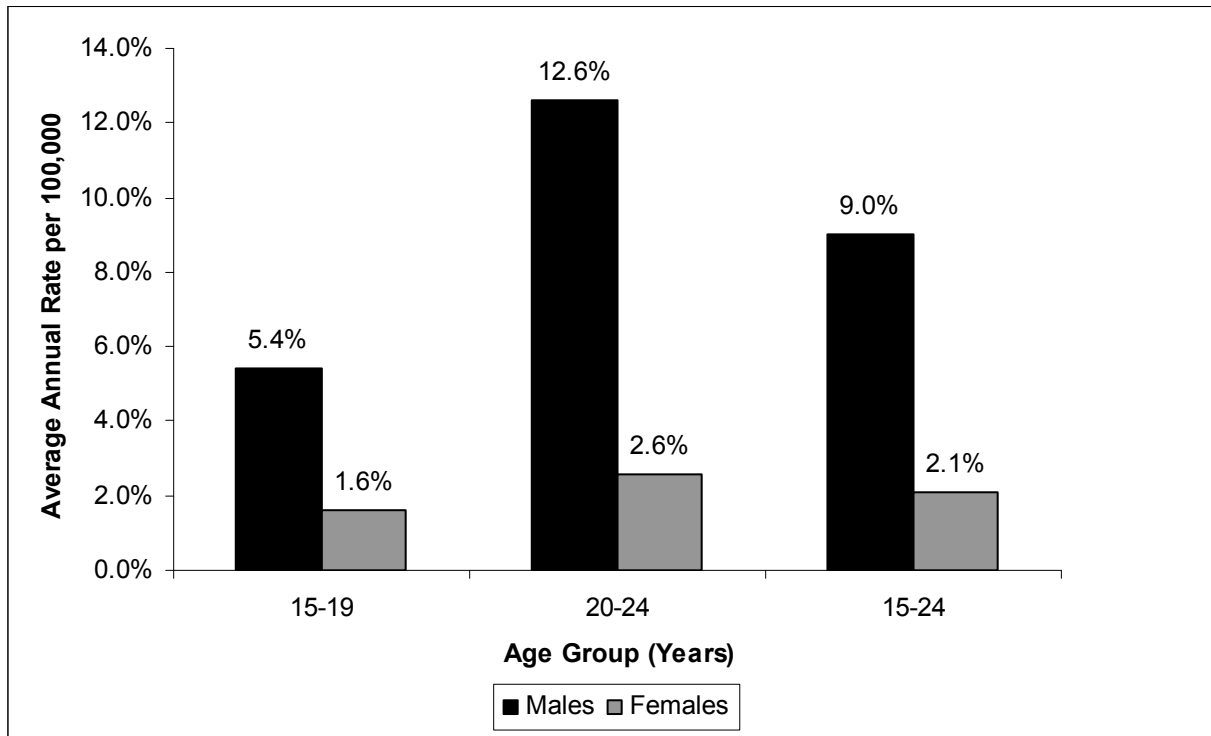
** 2010 target not provided for adolescent/young adult age group.

Average annual rates are presented due to small numbers.

Sources: MDPH, Registry of Vital Records and Statistics, 2008; CDC NCIPC, 2008.

- The suicide rate for male youth is substantially higher than for females (Figure 1-23). For young men aged 20–24 years, the average annual suicide rate for 2004–2006 was more than four times that for similarly aged young women (12.6% vs. 2.6%). For youth aged 15–19 years, the suicide rate for males for 2004–2006 was more than three times that for females (5.4% vs. 1.6%).

Figure 1-23. Average annual suicide rate* by sex and age group, Massachusetts residents aged 15–19 and 20–24 years, 2004–2006



*Average annual rate per 100,000 of that total, specific population
Source: MDPH, Registry of Vital Records and Statistics.

Healthy People 2010 Adolescent Objective 18-02: Reduce the rate of suicide attempts by adolescents.

In 2007, 8% of Massachusetts high school students reported that they attempted suicide, substantially higher than the *HP2010* target of 1% (Table 1–12).

Table 1-12. Percentage of high school students who attempted suicide in the past year — Massachusetts and United States

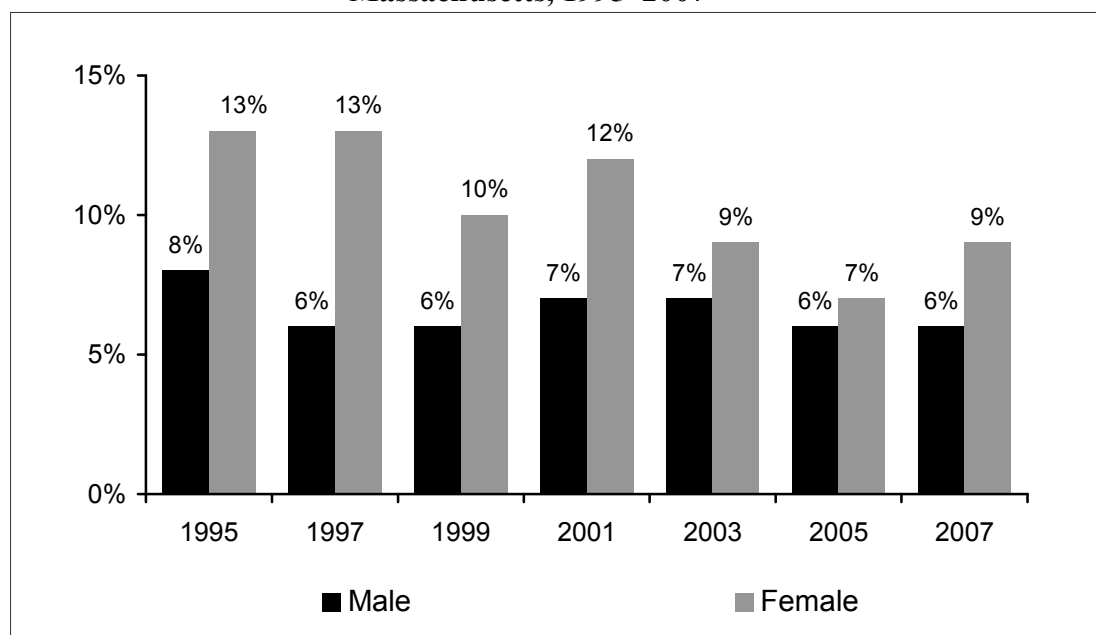
Massachusetts, 2005	U.S., 2005	Massachusetts, 2007	<i>HP2010</i> target
6%	8%	8%	1%

Sources: MYRBS, 2005, 2007; YRBSS, 2005

- The proportion of high school students reporting a suicide attempt in the past year declined between 1997 and 2007, from 10% to 8%. In 2007, 6% of male and 9% of female students reported that they attempted suicide in the past year (Figure 1-24). Thirty-six percent of these suicide attempts by Massachusetts youth required medical attention (MYRBS, 2007).
- From 1997 to 2007 there has been a significant decrease in the percentage of high school students who reported that they seriously considered a suicide attempt (20% and 32% in 1997 vs. 9% and 16% in 2007 for males and females, respectively) (Figure 1-25) (MYRBS, 2007).

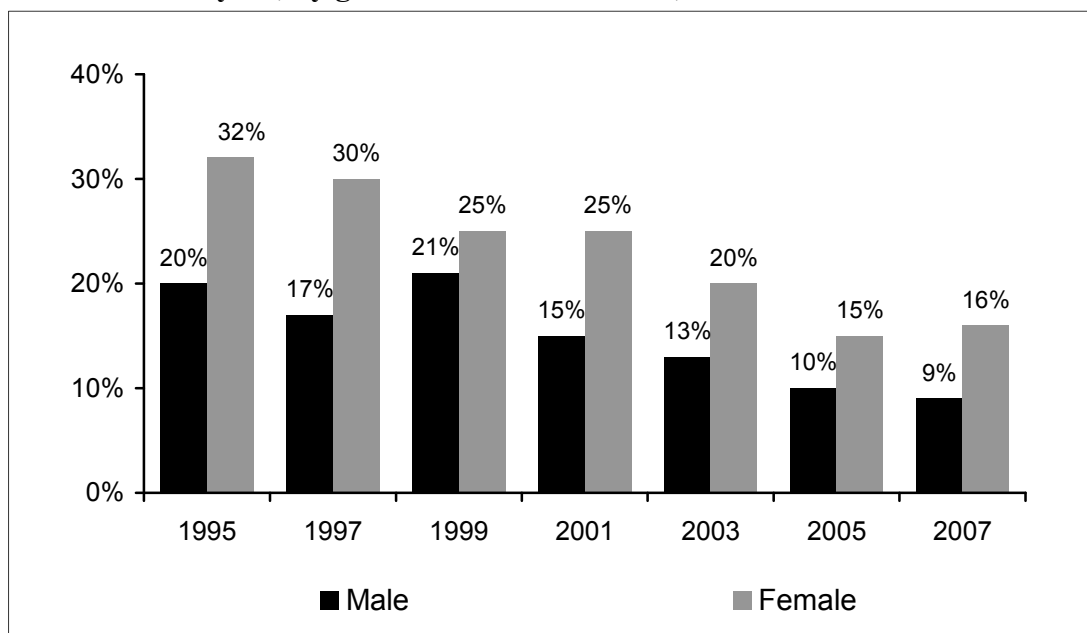
- Youth who identified as gay, lesbian or bisexual, or who reported any lifetime same-sex sexual contact had suicidality rates substantially higher than those of their peers. In 2007, 24% of these students reported a past-year suicide attempt, compared to 6% of other students, and 36% reported seriously considering suicide, compared with 10% of other students (MYRBS, 2007).
- Twenty-four percent of high school students reported that in the past year there had been a period of two weeks or more in which they felt so sad and hopeless that they had stopped doing some usual activities (MYRBS, 2007).
- Females reported more suicidal behaviors, and felt sad and hopeless at higher rates than males (MYRBS, 2007).

Figure 1-24. Percentage of high school students who attempted suicide in the past year — Massachusetts, 1995–2007



Source: MYRBS, 2007

Figure 1-25. Percentage of high school students who seriously considered suicide in past year, by gender — Massachusetts, 1995–2007



Source: MYRBS, 2007

Table 1-13. Number and rate (per 100,000) of acute care hospital stays* and Emergency Department visits for nonfatal self-inflicted injuries, MA residents aged 15–19 years and 20–24 years, FY2006

	15–19 years (number)	15–19 years (rate)	20–24 years (number)	20–24 years (rate)
Hospital stays	514	115.0	523	116.5
Emergency Department discharges	1580	353.6	1095	243.9

*Hospital stays represent the sum of inpatient discharges and observation stay discharges.

Sources: MA Division of Health Care Finance and Policy, MA Inpatient and Outpatient Observation Stay Databases and MA Emergency Department Discharge Database.

- Data on nonfatal self-inflicted injuries, including suicide attempts, are also available from acute care hospitals and emergency departments. As indicated in Table 1-13, there were over 1000 acute care hospitalizations and over 2600 emergency department discharges in FY2006 among youth aged 15–24 years for nonfatal, self-inflicted injury.

Healthy People 2010 Adolescent Objective 06-02: Reduce the proportion of children and adolescents with disabilities who are reported to be sad, unhappy or depressed.

- Mental health was also associated with disability status among youth. One-third of middle school youth with disabilities reported that in the past year there had been periods of two weeks or more in which they felt so sad and hopeless that they had stopped doing their usual activities compared to 9% of those without a disability. Thirteen percent of middle school

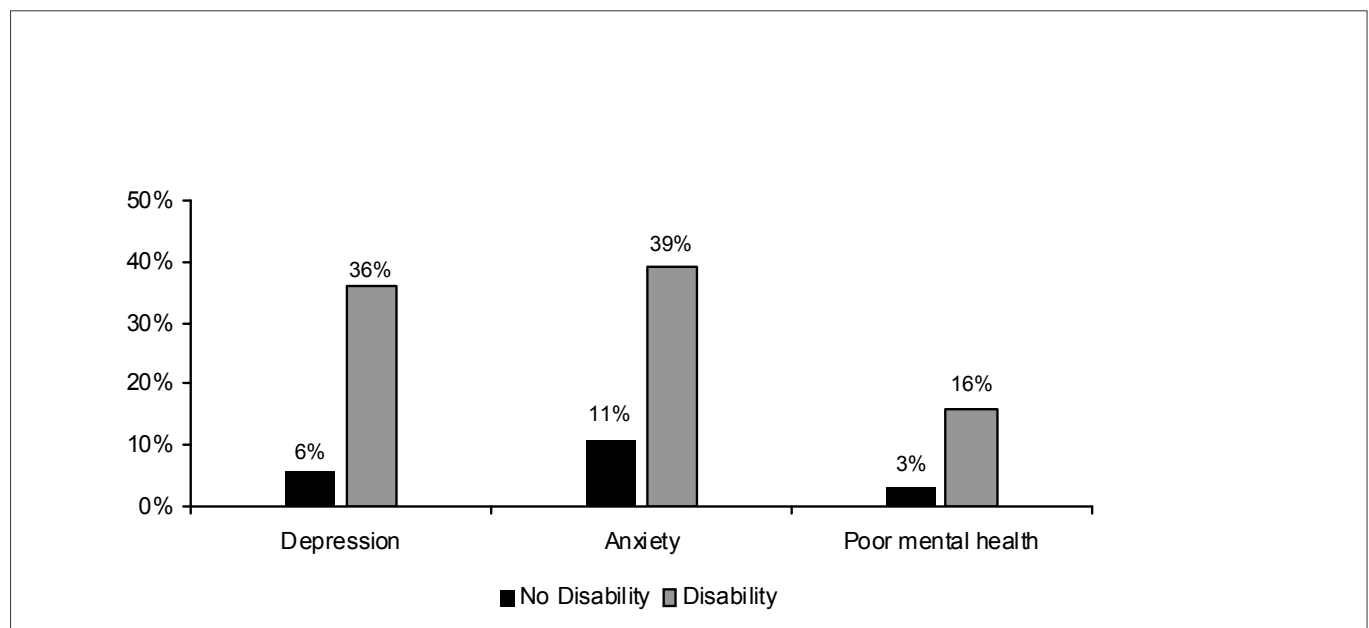
youth with disabilities attempted suicide compared to 3% of youth without disabilities (MYHS, 2007).

- The disparities were more apparent among high school youth. Almost 40% of those with disabilities felt so sad and hopeless that they had stopped doing their usual activities compared to 13% of their peers without disabilities. Thirteen percent of persons with disabilities attempted suicide compared to 2% among their non-disabled counterparts (MYHS, 2007).

There are significant differences in the mental health status of youth with disabilities aged 18–24 years compared to those without disabilities.

- Individuals with disabilities were much more likely to report 15 or more days being sad, blue, or depressed in the past month (36%) when compared to individuals without disabilities (6%) (MBRFSS, 2005–2006).
- Almost 40% of youth with disabilities aged 18–24 years (39%) reported being worried, tense, or anxious for 15 or more days in the past month compared to 11% of those without disabilities (MBRFSS, 2005–2006).
- In addition, 16% of youth with disabilities aged 18–24 years reported 15 or more days of poor mental health compared to 3% of similarly aged youth without disabilities (Figure 1-26) (MBRFSS, 2005–2006).

Figure 1-26. Percentage of MA residents aged 18–24 years who reported depression, anxiety, or poor mental health for 15 or more days in the past month — Massachusetts, 2005–2006



Source: MBRFSS, 2005–2006

Goal

2

All youth have nurturing relationships with adults and positive relationships with peers.

A Shared Vision:

All Massachusetts youth grow up to be healthy, **caring** and economically self-sufficient adults.

RELATIONSHIPS WITH ADULTS

One of the most important protective factors for positive youth development is a stable, caring relationship with an adult (Bernard, 1991; Resnick et al., 1997, 2000; Rinehart, 2000). For most youth, this may be a parent or other relative. For others, a teacher or community-based mentor may fill this role.

- In 2007, more than four-fifths of Massachusetts high school students (84%) felt that they could talk to a parent or other adult in their family about things that are important to them (85% of White, 81% of Black, 81% of Asian, and 79% of Hispanic/Latino students) (MYRBS, 2007). This has improved from 76% in 2001 (MYRBS, 2001).
- Students who felt they could talk to a parent or other adult in their family were significantly less likely than their peers to report nearly all substance use, violence, and injury-related behaviors (MYRBS, 2007).
- Sixty-nine percent of students indicated that they feel that they could talk to a teacher or other adult at school if they had a problem (MYRBS, 2007).

FAMILY LIVING ARRANGEMENTS

Even as adolescents become increasingly independent, the family setting remains a primary sphere in which they have ongoing, nurturing relationships with adults. While there is a diversity of family structures in Massachusetts, most children and youth aged less than 18 years live in households with their parents or other adult relatives.

- In 2007, 95% of high school students reported that they typically sleep at home with their parents or guardians at night (MYRBS, 2007).
- Among youth aged 15–19 years in households, 65% live with two married parents, 26% live with a single female head of household, 7% live with a single male head of household, and 3% live in non-family households. The percentage of youth living in households with two married parents varies by race/ethnicity as follows; 72% among White, non-Hispanic youth compared with 37% among Black, non-Hispanics and Hispanics (U.S. Census Bureau, American Community Survey, 2006).
- A small number of youth aged 13–18 years, primarily young women, are heads of household with a dependent child. As of June 1, 2007, there were 1,047 head-of-household youth aged 13–18 years receiving Transitional Aid for Families with Dependent Children. The majority of these (90%) were aged 17–18 years, but 104 were aged 13–16 years (Massachusetts Department of Transitional Assistance, 2007).

- A small but very high-risk group of youth and young adults are those who are runaways or homeless. (See *Goal 3: All youth have access to safe places for living and learning.*)

ADDRESSING GAPS IN NURTURING: FAMILY ABUSE AND NEGLECT

Although the majority of teens live in stable families, there are a number of adolescents who need services from the Commonwealth to provide protection and supervision of their well-being. For families in which parents or caretakers are maltreating children and youth, the Commonwealth intervenes for the protection of the child. The Massachusetts Department of Children and Families (DCF, formerly named the Department of Social Services [DSS]), the state's child welfare and protection agency, becomes involved with a family if there is any concern that a parent, stepparent, guardian, or other responsible caretaker may be abusing or neglecting a child or youth and is unable to meet the youth's basic needs. Abuse and maltreatment may include emotional, physical, sexual, or verbal abuse. DCF is legally responsible for children and youth up to age 18 years, and may serve young adults through age 22 years who have been in its custody as minors.

DCF works first and foremost to keep families together. Approximately 75% of the time, agency staff work with families at home. In cases where children or youth are unable to safely remain with parents or caretakers, DCF provides temporary out-of-home care, with extended family whenever possible, until they can return. In cases where reunification with the family is not possible, DCF seeks to provide a child or youth with an alternate permanent situation such as adoption or guardianship.

- To assist parents in better caring for their children or youth, the Support and Stabilization (S&S) Program (formerly named the Family Based Services Program) provides in-home therapeutic and outreach services as well as treatment planning and coordination for the family. As of July 1, 2006 there were 3,254 active service referrals for S&S services, representing 2,822 cases. Over the course of 2006, just over 9,000 persons had an active service referral for S&S (Massachusetts DSS, 2007).
- For those children or youth who are unable to remain at home because they have experienced or are at risk for severe abuse or neglect, DCF provides temporary out-of-home care through foster care, or group residential care. These short-term measures are meant to provide interim guidance and support to families until the children or youth can safely be returned home. The majority of youth (74%) who come into DCF placement live in a community-based foster home, typically with a family in a private home. As of March 31, 2008, there were 8,045 youth in foster care in Massachusetts. The largest age group in foster care is 12–17 years, accounting for 34% of persons in foster care (Massachusetts DCF, 2008).
- At times, it is clinically appropriate to place a child or youth in a group care setting. Youth are placed in the least restrictive level of care until they are able to return home safely. As of March 31, 2008, there were 2,346 youth in group residential (congregate) care (Massachusetts DCF, 2008).
- As of March 31, 2008, there were 2,480 children or youth in DCF custody whose service plan goal was adoption. The racial/ethnic composition of this group of children and youth was: 61% White, 16% Black, 1% Asian, <1% Native American, 8% multiracial, and 15%

unable to determine; 25% were of Hispanic origin. Fourteen percent were youth aged 12–17 years (Massachusetts DCF, 2008).

- At times when neither reunification nor adoption has been achieved, youth may continue in DCF care with placement and supportive services which may continue to age 22 years.
- DCF clients reaching age 18 years who want to pursue an educational or vocational goal and who are willing to follow a service plan contract, are eligible to obtain voluntary DCF services up to age 22 years. As of March 31, 2008, there were 1,659 young adults aged 18–23 years in placement (1,582 or 95% were aged 18–21 years). For clients reaching adulthood who do not choose to continue with voluntary services, DCF support services are available up to age 21 years through the Adolescent Outreach Program (Massachusetts DCF, 2008).

MENTORING

“Mentoring is often defined as a sustained relationship between a young person and an adult in which the adult provides the young person with support, guidance, and assistance.” – Jekielek et al., 2002

Mentoring programs have become increasingly popular approaches to increasing youth and young adult access to healthy and caring relationships with adults. Mentoring has been shown to provide youth with a positive connection to an adult, to reduce their risk-taking behavior and to be effective for at-risk youth (Jekielek et al., 2002). Structured mentoring programs can increase the number of quality relationships between caring adults and youth who are at risk of not meeting their full potential.

Massachusetts has numerous initiatives to increase the availability of mentoring relationships for youth.

- Approximately 17,000 Massachusetts youth aged 10–18 years were involved in formal mentoring relationships in 2006 (Mass Mentoring Partnership, personal communication, 2007).
- The Massachusetts Service Alliance funds about 30 mentoring programs each year.
- The Mass Mentoring Partnership (MMP) advocates for expanded mentoring programs and provides training and technical assistance. In 2006, the MMP provided training and technical assistance to over 140 organizations. In addition, in 2006 MMP also created new programs resulting in about 200 matches and referred an additional 600 youth to existing mentoring programs (Mass Mentoring Partnership, personal communication, 2007).
- Big Brothers Big Sisters of America (BBBSA) links youth aged 7–15 years with adult volunteer mentors. The BBBSA model has been found to be effective at reducing risk behaviors such as substance abuse and school attendance (Tierney, et al., 2000). There are sixteen BBBSA affiliates in Massachusetts. The largest affiliate, Big Brothers of Massachusetts Bay, supports more than 1,000 active big brother-little brother relationships in 80 Massachusetts communities.
- There are approximately 5,000 youth on waiting lists for mentors, about 10% have been on waiting lists for 1 year or longer (Mass Mentoring Partnership, personal communication, 2007).

In addition to these broad-based programs, there are also programs that focus specifically on developing mentoring relationships for youth with special health needs and disabilities. For youth with disabilities, social isolation from their peers can be common.

- The Massachusetts Department of Mental Retardation provides funding to support the Massachusetts Chapter of Best Buddies International, whose mission is to enhance the lives of people with intellectual disabilities by providing opportunities for one-to-one friendships and integrated employment. Best Buddies matches middle school, high school, and college student volunteers along with adults in the community with people with intellectual disabilities in one-to-one friendships. In 2007, there were 4,969 participants matched in friendships, including about 2,300 people with intellectual disabilities. These participants were at 17 middle schools, 71 high schools, and 27 colleges (Massachusetts DMR, 2007). In addition, participants were matched in the Citizens program, the adult friendship program, and e-Buddies, an e-mail based friendship program. Twenty-five participants were also actively receiving services through Best Buddies Jobs.

RELATIONSHIPS WITH PEERS

Peers have a strong influence on the lives of youth (Bearman et al., 1999). This influence can be both positive and negative, and appears to be strongest with the immediate peer group. Please refer to Goal 5 for information on youth structured activities, community service and civic participation.

DATING AND RELATIONSHIPS: DATING VIOLENCE AND SEXUAL VIOLENCE

Dating and testing romantic relationships are important tasks of healthy adolescent development. However, not all such relationships are nurturing. Dating violence and sexual violence can have a profound impact on youth. According to the Massachusetts Youth Risk Behavior Survey, students who experienced either dating violence or sexual contact against their will also reported higher rates of risky behaviors. They were significantly more likely than other youth to have considered suicide, attempted suicide, had sexual intercourse, to be currently sexually active, to have been or gotten someone pregnant, and to report drinking heavily and using illegal drugs (MYRBS, 2007).

- Eleven percent of all high school students reported experiencing violence in a dating relationship. A greater proportion of female students reported having been physically or sexually hurt by a date than did male students (15% female, 7% male) (MYRBS, 2007).
- Twelve percent of all students reported ever experiencing sexual contact against their will. Female students were more likely than male students to report this experience (18% vs. 7%) (MYRBS, 2007).
- Data from Massachusetts Rape Crisis Centers indicate that friends and acquaintances (47%) were most commonly identified as the perpetrators in sexually abusive incidents for youth survivors aged 13–19 years (MDPH, 2006).

There are 17 Sexual Assault Prevention and Survivor Services programs across the state funded by MDPH to prevent teen dating violence and sexual violence as well as to promote healthy relationship behaviors.

- During July 2006–May 2007 approximately 400 educational presentations on teen dating violence and sexual violence prevention were made by MDPH-funded Rape Crisis Centers to Massachusetts youth (elementary, middle, and high school students and youth organizations) (MDPH preliminary data, 2007).

Additional initiatives that increase protective factors and promote positive youth development are also being funded at MDPH:

- Safe Spaces for GLBT Youth funds 10 GLBT youth development programs and one state-wide capacity and training program which provides 3 GLBT Institutes throughout the state and maintains a website with free downloadable resources.
- The Youth Violence Prevention Program funded 21 community-based organizations implementing a wide range of youth development initiatives through the Prevention of Youth Violence through Promotion of Positive Youth Development RFR.

Goal

3

All youth have access to safe places for living, learning and working.

A Shared Vision:

All Massachusetts youth **grow up to be healthy**, caring and economically self-sufficient adults.

The ability to be – and feel – safe in their homes, communities, schools and workplaces is a fundamental building block for the healthy development of youth and young adults. Safety encompasses traditional public safety, including youth crime reduction, and public health goals related to injury and violence prevention.

PREVENTING INJURY-RELATED DEATH

Healthy People 2010 Adolescent Objective 16-03 a, b, c: Reduce deaths of adolescents and young adults.

Death is fortunately a rare event among youth aged 10–14 years. Massachusetts youth have lower death rates in every age group than do youth nationally (Table 3-1). However, while still infrequent, injuries account for nearly three quarters (72%) of all deaths among youth aged 15–24 years (Figure 3-1).

- Massachusetts has met the *HP2010* goal for reducing death rates among youth aged 10–14 years and has almost met the goal for youth aged 15–19 years (Table 3-1).

**Table 3-1. Youth death rates*, by age group
Massachusetts and United States — 2005 and 2004**

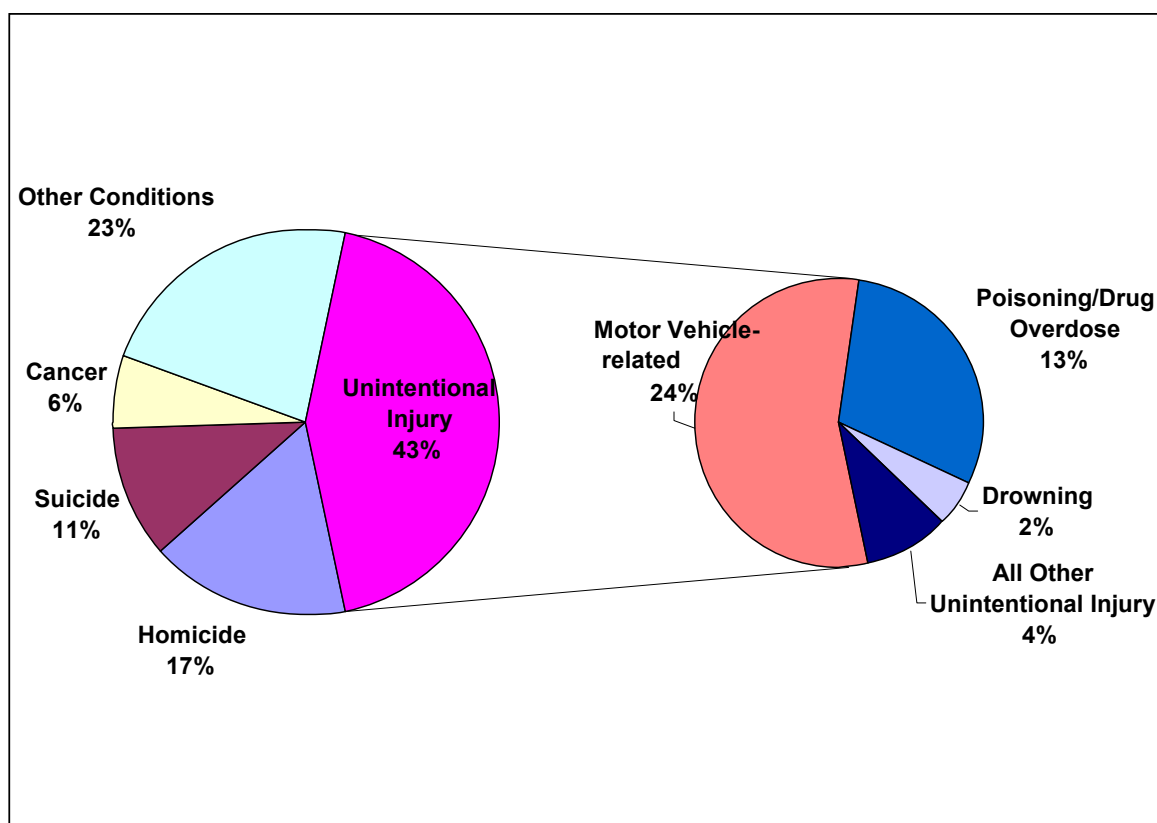
Age Group	Massachusetts, 2005	U.S., 2004	<i>HP2010</i>
10–14 years	8.8	18.7	16.8
15–19 years	40.6	66.1	39.8
20–24 years	74.4	94.0	49.0

* Rates per 100,000 of that total, specific population per year.

Source: Registry of Vital Records and Statistics, MDPH; National Vital Statistics System, CDC.

- The leading causes of death from injury among youth and young adults aged 15–24 years are motor vehicle crashes and other unintentional injuries, suicide, homicide, and deaths of undetermined intent (Figure 3-1). (Suicide, the third leading cause of death in this age group, is discussed in *Goal 1: Mental Health*.)

Figure 3-1. Leading causes of death, youth aged 15–24 years — Massachusetts, 2005 (N=489)



Source: Registry of Vital Records and Statistics, MDPH.

MOTOR VEHICLE SAFETY

Healthy People 2010 Adolescent Objective 15-15 a: Reduce deaths caused by motor vehicle crashes.

Motor vehicle traffic injuries were the leading cause of unintentional injury death among youth and young adults in 2005 (Figure 3-1).

Table 3-2. Motor vehicle traffic death rates*, by age group — Massachusetts residents, 2005 and United States, 2004

Age Group	Massachusetts, 2005 number of deaths	Massachusetts, 2005 death rate	U.S., 2004 death rate	HP2010 target
10–14 years	7	1.7	4.4	**
15–19 years	52	12.1	24.7	**
20–24 years	59	13.9	26.9	**
Total	118	9.3	18.6	**

* Deaths per 100,000 population.

**2010 target not provided for adolescent/young adult age group.

Sources: Registry of Vital Records and Statistics, MDPH; National Vital Statistics Reporting System, CDC

- Ninety (76%) of the 118 motor vehicle traffic deaths in youth during 2005 were among occupants of motor vehicles. Persons aged 15–19 and 20–24 years had the highest rates of motor vehicle occupant fatalities among persons aged 10–24 years.
- The rate of hospital discharges for motor vehicle traffic injuries among persons aged 10–24 years was approximately 18 times the death rate (Table 3-3).
- Persons aged 15–19 years had the highest rate of hospital discharges for nonfatal occupant and pedal cyclist/pedestrian injury among persons aged 10–24 years. Persons aged 20–24 years had the highest rate of hospital discharges for non-fatal motorcycle injury among youth aged 10–24 years.
- Hospital discharges for motor vehicle occupant injury among persons aged 15–19 and 20–24 years increased 29% and 19%, respectively, between 2000 and 2005.

Table 3-3. Number and rate of hospital discharges* related to motor vehicle traffic injury by age group — Massachusetts residents, 2005

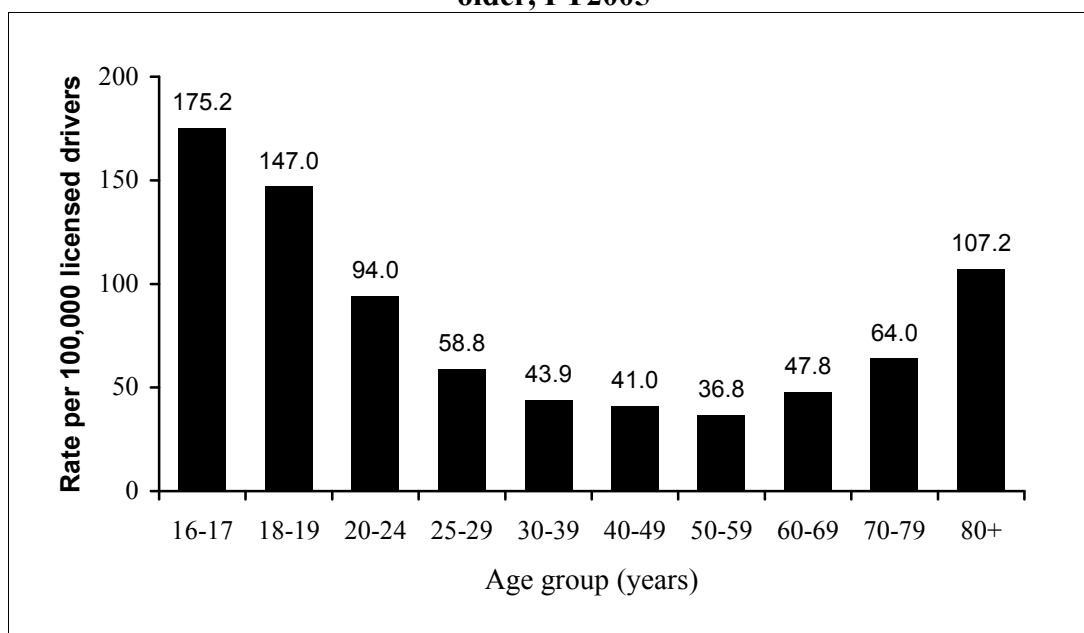
Age Group	Number of Discharges	Discharge Rate**
10–14 years	119	28.2
15–19 years	695	162.3
20–24 years	668	157.7
Total	1482	166.4

*Hospital Discharges include inpatient hospital discharges and observation bed stays. Excludes deaths in the hospital and transfers to another acute care facility.

** Rate per 100,000 population.

Sources: Massachusetts Inpatient Hospital and Observation Stay Discharge Databases, MA Division of Health Care Finance and Policy, 2005.

Figure 3-2: Hospital discharge* rates for motor vehicle traffic injury among drivers of a motor vehicle per 100,000 licensed drivers, Massachusetts residents aged 16 years and older, FY2005



Source: Massachusetts Inpatient Hospital and Observation Stay Discharge Databases, MA Division of Health Care Finance and Policy; Rates calculated using 2005 Licensed Driver Data from the MA Registry of Motor Vehicles.

- Hospital discharge rates associated with motor vehicle driver injuries were highest among youth aged 16–17 years (rate = 175.2/100,000) and 18–19 years (rate = 147.0 /100,000) in 2005 (Figure 3-2).

Healthy People 2010 Adolescent Objective 26-01 a: Reduce alcohol involved motor vehicle fatalities among adolescents and young adults.

Alcohol is a major contributing factor to motor vehicle crashes for youth. In 2005, 28% of drivers aged 16–24 years who were involved in a fatal motor vehicle crash had a blood alcohol concentration of .01 or above (Table 3-4). (Note: These figures are based on a total of 79 **driver** deaths that occurred in Massachusetts, which may include out-of-state residents).

Table 3-4: Motor vehicle fatalities among drivers aged 16–24 years where blood alcohol concentration (BAC) was .01 g/dl or greater — Massachusetts*, 2005

Age Group	Alcohol+ (BAC≥.01)	Alcohol+ (BAC≥.08)
16–19 years	2	1
20–24 years	20	17
Total	22	18

*N=79 total motor vehicle fatalities among drivers in this age group which includes drivers of any motor vehicle, including motorcycles. May include deaths to out-of-state residents. Blood alcohol concentrations may not be known for all drivers. Therefore, caution should be used when interpreting these numbers. These numbers may differ from the National Highway Traffic Safety Administration's published reports.

Source: National Highway and Traffic Safety Administration, Fatality Analysis Reporting System.

Healthy People 2010 Adolescent Objective 26-06: Reduce the proportion of adolescents who report that they rode, during the previous 30 days, with a driver who had been drinking alcohol.

- Twenty-six percent of Massachusetts high school students reported riding with a drinking driver in the previous 30 days in 2007 (Table 3-5). This is lower than the national average, below the *Healthy People 2010* target, and has decreased significantly from the 1995 rate of 37%. However, this statistic needs to be substantially lower.

Table 3-5. Percentage of high school students who rode with a drinking driver during the past month — Massachusetts and United States

Massachusetts, 2005	U.S., 2005	Massachusetts, 2007	<i>HP2010</i> target
27%	29%	26%	30%

Source: MYRBS, 2005 and 2007; YRBS, 2005

- In 2004 and 2006, 92% of Massachusetts young adults aged 18–24 years reported that they did not drink and drive within the past month, similar to the national rate of 91% (MBRFSS, 2004, 2006).

Healthy People 2010 Adolescent Objective 15-19: Increase use of safety belts.

- Using safety belts reduces the incidence of death and injury when a motor vehicle crash occurs. Unfortunately, Massachusetts youth are less likely than their peers nationally to report using a seat belt (Table 3-6). However, there has been significant improvement in seat belt use since 1997, when 29% of high school students reported they rarely or never used a seat belt (MYRBS, 2007).

Table 3-6. Percentage of high school students who reported rarely or never wearing a seat belt when riding as a passenger — Massachusetts and United States

Massachusetts, 2005	U.S., 2005	Massachusetts, 2007	<i>HP2010</i> target
15%	10%	15%	*

*2010 target not provided for adolescent/young adult age group.

Source: MYRBS, 2005 and 2007; YRBS, 2005.

- In 2006, 79% of Massachusetts young adults aged 18–24 years reported wearing a seatbelt in the past month, compared to 88% of adults aged 18–24 years nationally (MBRFSS, 2006).

- According to the *Massachusetts Safety Belt Usage Observation Study* prepared for the Governor's Highway Safety Bureau in 2006, observed teen safety belt usage was 59% in 2006 (weighted estimate). This compares to 83% of children, 67% of adults and 76% of older adults who were observed using their safety belts.⁶

SAFE LEARNING ENVIRONMENTS: SCHOOL SAFETY

School safety has become an increasing concern, along a continuum of incidents from bullying to rare but lethal student shootings. An orderly, safe learning environment is critical to students' abilities to successfully pursue their educational aspirations. Data from the 2007 administration of the Massachusetts YRBS indicate that students who reported violent behavior or who experienced violence were significantly less likely than their peers to have received grades of mostly As, mostly Bs, or mostly Cs in the previous year. Poor academic achievement was associated with being in a physical fight (on or off school grounds), carrying a weapon (on or off school grounds), carrying a gun, gang involvement, skipping school because of feeling unsafe, being threatened or injured with a weapon at school, and experiencing dating violence (MYRBS, 2007).

Healthy People 2010 Adolescent Objective 15-38: Reduce physical fighting among adolescents.

- In 2007, 28% of Massachusetts high school students reported that they were in at least one physical fight in the previous year (36% of males and 20% of females) (Table 3-7), a significant decrease from the 1995 rate of 38% and below the *HP2010* goal of 32% (MYRBS, 2007).

Table 3-7. Percentage of high school students in a physical fight one or more times during the past 12 months — Massachusetts and United States

Massachusetts, 2005	U.S.	Massachusetts, 2007	<i>HP2010</i> target
29%	36%	28%	32%

Source: MYRBS, 2005 and 2007; YRBS, 2005.

- Four percent of students (6% of males and 2% of females) reported that they were in a fight in the past year in which they were injured and had to be treated by a doctor or nurse (MYRBS, 2007).
- Nine percent of high school students reported that they were in a physical fight on school property in the previous year. This represents a significant decrease from 15% in 1995 (MYRBS, 2007).

⁶ A total of 50,180 front seat occupants (drivers and passengers) were observed at 140 sites throughout Massachusetts.

Healthy People 2010 Adolescent Objective 15-39: Reduce weapon carrying by adolescents on school property.

- In 2007, fewer Massachusetts high school students carried a weapon such as a gun, knife, or club on school property than did students nationally (Table 3-8). Furthermore, the percentage of Massachusetts students who carried a weapon on school property decreased from 1995 to 2007, from 9.2% to 5.0%, approaching the *HP2010* goal of 4.9% (MYRBS, 2007).

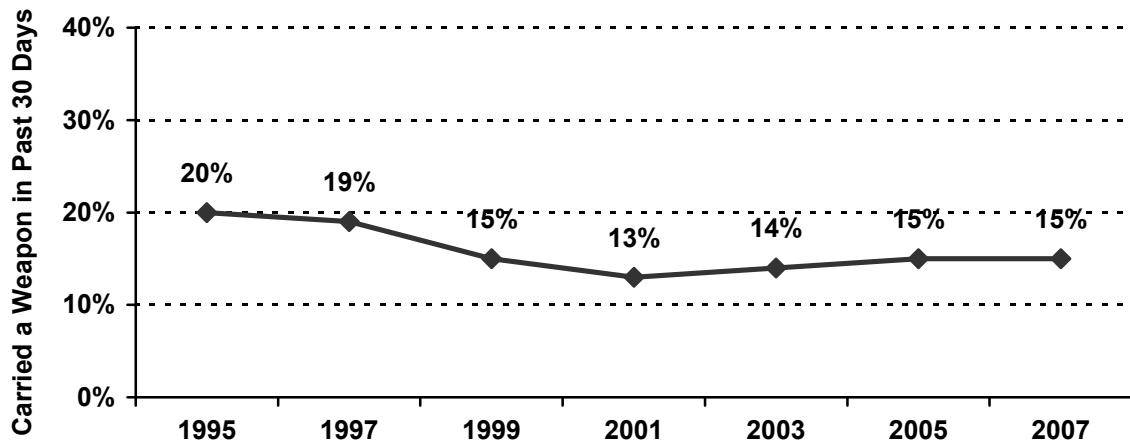
Table 3-8. Percentage of high school students who carried a weapon on school property on one or more of the past 30 days — Massachusetts and United States

Massachusetts, 2005	U.S.	Massachusetts, 2007	<i>HP2010</i> target
5.8%	6.5%	5.0%	4.9%

Source: MYRBS, 2005 and 2007; YRBS, 2005

- In 2007, fifteen percent of high school youth reported that they carried a weapon in the past 30 days. This represents a statistically significant decrease from 20% in 1995, but a slight increase from a low of 13% in 2001 (Figure 3-3) (MYRBS, 2007).

Figure 3-3. Percentage of high school students who carried a weapon such as a gun, knife or club on one or more of the past 30 days — Massachusetts, 1995–2007



Source: MYRBS, 1995–2007.

Other School Safety Data

- Five percent of high school students were threatened or injured with a weapon on school property in the 12 months before the survey (compared to 8% in 1995) (MYRBS, 2007).
- Five percent of high school students skipped school at least once in the 30 days before the survey because they felt unsafe either at school or on their way to or from school (compared to 6% in 1995). This percentage peaked in 2001, when 8% reported skipping school because they felt unsafe (MYRBS, 2007).
- Twenty-one percent of male students and 22% of female students reported being bullied at school in the 12 months before the survey. Also, 21% of students reported that at some time in the past 12 months their property had been stolen or deliberately damaged at school (MYRBS, 2007).
- Students who identified themselves as gay, lesbian, or bisexual or who reported same-sex sexual contact had negative experiences related to personal safety significantly more frequently than other students (Table 3-9). These youth reported significantly higher rates of weapon carrying, physical fighting, gang involvement, skipping school because of feeling unsafe, being bullied, being

Definitions

In Massachusetts, *delinquents* are defined as children and youth aged 7–17 years adjudicated delinquent as a result of breaking a state law, a city ordinance, or town by-law.

Arrests in Massachusetts are categorized into Part I and Part II crimes. Part I crimes, also known as Index crimes, include the violent offenses of homicide, forcible rape, robbery, and aggravated assault, and the serious property crimes of burglary, larceny, motor vehicle theft, and arson. Part II crimes encompass 21 less serious offenses, including simple assault, drug offenses, vandalism, prostitution, gambling, disorderly conduct, and juvenile status offenses.

threatened or injured with a weapon at school, experiencing dating violence, and experiencing unwanted sexual contact (MYRBS, 2007).

- Massachusetts was the first state in the nation to address safety for gay, lesbian, bisexual, transgender and questioning youth by funding programs within schools and communities to address these issues. The Massachusetts Department of Elementary and Secondary Education supports Gay Straight Alliances, programs designed to improve schools' community and safety for these populations, and the Safe Schools Program, which provides training for faculty, staff, and students on violence and suicide prevention for gay and lesbian youth. State funding also supports the Safe Spaces for GLBT Youth program at the Massachusetts Department of Public Health to provide community based youth development programs and technical support throughout the state.

Table 3-9. Percentage of high school students reporting personal safety behaviors, by sexual orientation —Massachusetts, 2007

Reported Behavior	Youth identifying as GLB or reporting same-sex sexual contact	Other Youth
Skipped school in the past month because of feeling unsafe en route to or at school	13%	4%
Was threatened/injured with a weapon at school in the past year	14%	4%
Was in a physical fight at school in the past year	21%	8%

Source: MYRBS, 2007

- In 2007, U.S.-born youth reported significantly lower rates of having been threatened or injured with a weapon in school than did recent immigrants (5% vs. 16%) (MYRBS, 2007).
- Youth receiving special education services were also significantly more likely than their peers to report being threatened or injured with a weapon at school, being in a physical fight, in general and on school property, being bullied, skipping school because they felt unsafe, and experiencing dating violence (MYRBS, 2007).

NEIGHBORHOOD AND COMMUNITY SAFETY

Healthy People 2010 Adolescent Objective 15-32: Reduce homicides.

- While the Massachusetts homicide rate in every youth age group is lower than the national average (Table 3-10), the homicide rate for youth aged 15–24 years in Massachusetts increased 71% between 2000 and 2005 (Figure 3-4).

Table 3-10. Homicide rate*, by age group — Massachusetts, 2005 and United States, 2004

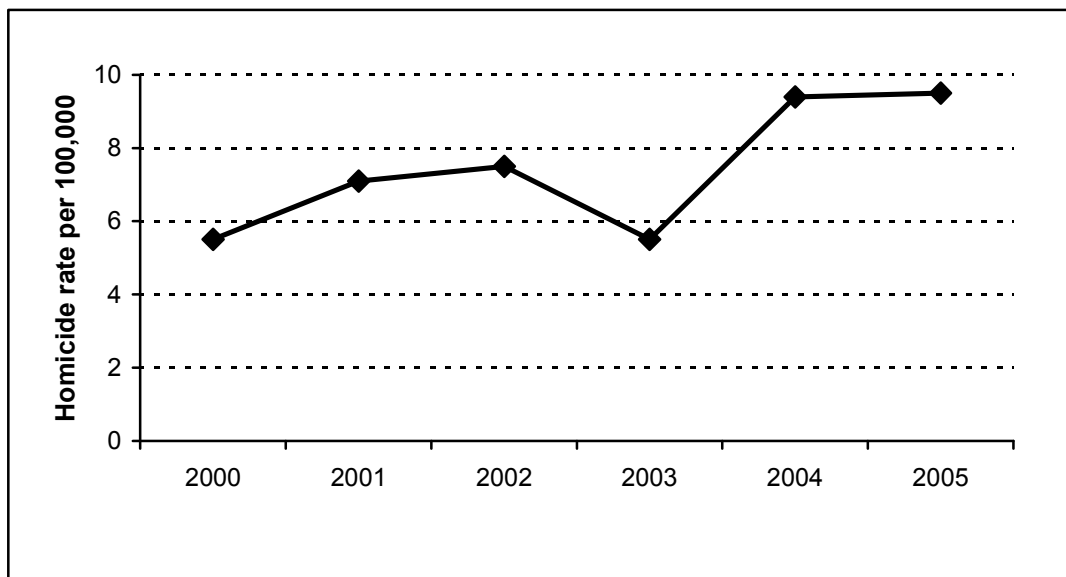
Age Group	Massachusetts, 2005	U.S., 2004	HP2010 target
15–19 years	7.7	9.3	**
20–24 years	11.3	15.0	**
15–24 years	9.5	12.2	**

* Number of deaths per 100,000 population in age group.

**2010 target not provided for adolescent/young adult age group.

Sources: Registry of Vital Records and Statistics, MDPH; CDC, NCIPC.

Figure 3-4. Homicide rate, youth aged 15–24 years — Massachusetts 2000–2005



Source: Registry of Vital Records and Statistics, MDPH

- In 2005, there were 81 homicides of youth aged 15–24 years, accounting for 17% of deaths in this age group.

Table 3-10. Number and rate* of reported Emergency Department visits for violent gunshot and sharp instrument injury — Massachusetts residents aged 15–24 years, 2005

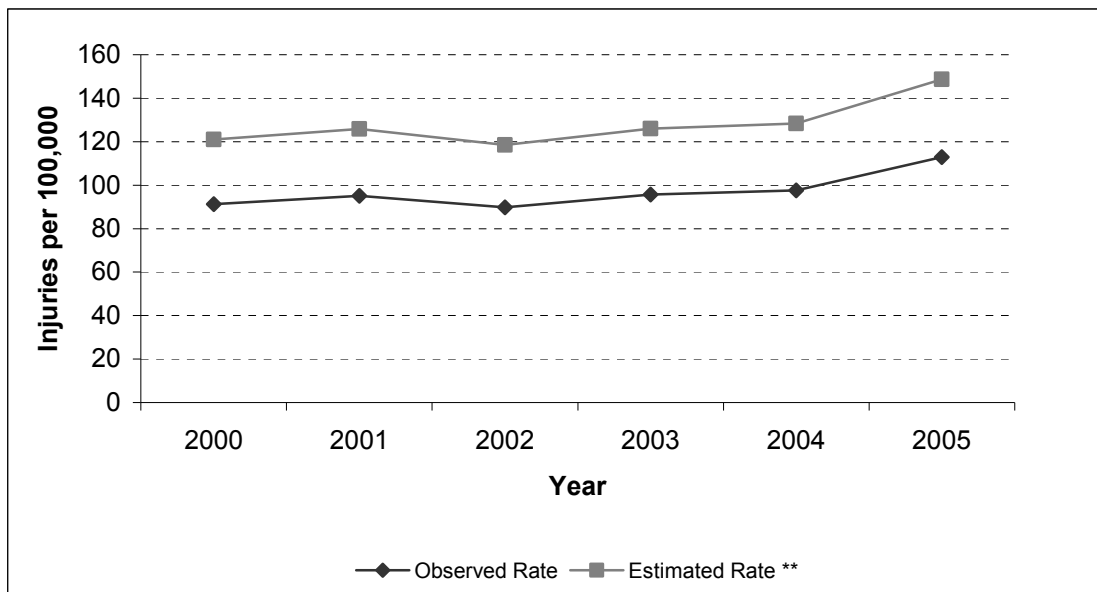
Age Group	Gun-related		Sharp instrument-related		Total	
	N	Rate	N	Rate	N	Rate
15–19 years	174	40.6	277	64.7	451	105.3
20–24 years	148	34.9	363	85.7	511	120.7
15–24 years	322	37.8	640	75.1	962	112.9

*Per 100,000 population in age group.

Source: Weapon-related Injury Surveillance System (WRISS), MDPH.

- Youth aged 15–24 years have the highest rates of Emergency Department visits for violent gun and sharp instrument-related injury compared to all other age groups.
- In 2005, among youth aged 15–24 years, those who were aged 15–19 years had a higher rate of Emergency Department visits for violent gun-related injury than persons aged 20–24 years (40.6 per 100,000 and 34.9 per 100,000, respectively) (Table 3-10).
- The rate of Emergency Department visits for violent sharp instrument-related injury among young adults aged 20–24 years was higher than among youth aged 15–19 years (85.7 per 100,000 and 64.7 per 100,000, respectively) in 2005.
- The rate of Emergency Department visits for violent gun and sharp instrument-related injury has increased among youth aged 15–24 years since 2000, from 91.2 per 100,000 to 112.9 per 100,000 (Figure 3-5).

Figure 3-5. Violent gunshot and sharp instrument-related injury rates* among Massachusetts residents aged 15–24 years reported by MA Emergency Departments, 2000–2005



Source: MDPH, Weapon-Related Injury Surveillance System.

**Hospitals report approximately 70-80% of reportable weapon-related cases to WRISS. The estimated rates presented above are based on a weight used to approximate the number of under-reported WRISS cases. Numbers presented include fatalities.

YOUTH CRIME

In Massachusetts, youth aged less than 18 years who are arrested for alleged crimes are considered juveniles. Their cases are handled predominately through the juvenile court system. Those youth found to be guilty ('adjudicated delinquent') may be committed to the custody of the Department of Youth Services (DYS) or, for less serious offenses, may be referred directly to

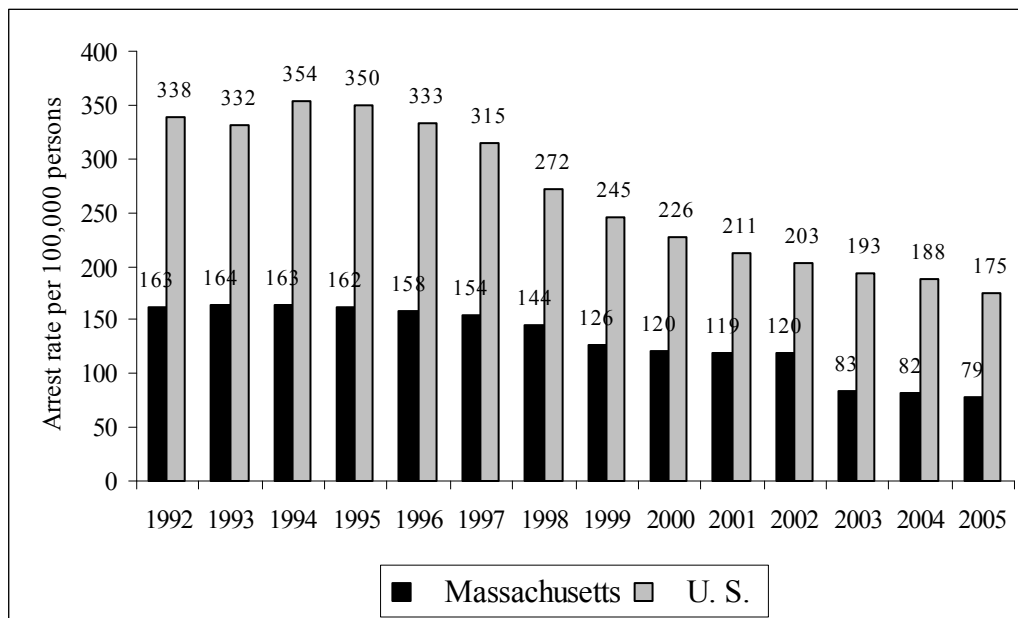
probation. Typically, they are released from commitment or probationary supervision upon reaching age 18 years. A small number of youth, categorized as ‘youthful offenders’, are now committed to DYS past their 18th birthdays.

JUVENILE CRIME ARRESTS

Part I Crime Arrests (see box for definition)

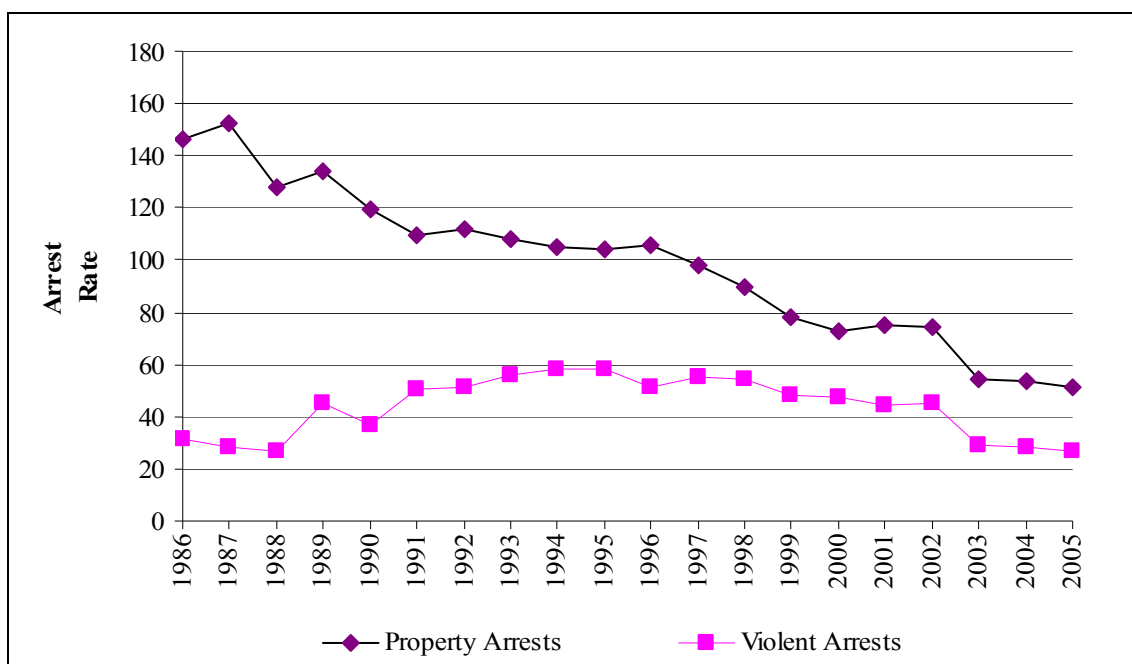
- For at least the past fourteen years, Massachusetts has had lower Part I juvenile arrest rates than the United States as a whole. In 2005, for every 100,000 individuals in the United States there were 175 Part I juvenile arrests; whereas, for every 100,000 individuals in Massachusetts there were only 79 Part I juvenile arrests (Federal Bureau of Investigation, 2005). In 2005, the Massachusetts juvenile arrest rate was less than half the juvenile arrest rate in the United States (Figure 3-6).
- Over time, the Part I juvenile arrest rate has decreased significantly in both the United States and in Massachusetts. From 1995 to 2005, the Part I juvenile arrest rate in Massachusetts has decreased by 52% and in the United States by 50% (Figure 3-6).
- For every 100,000 persons in Massachusetts in 2005, there were 52 Part I arrests of individuals aged <18 years for property crimes and 27 for violent crimes (Figure 3-7). The 2005 Massachusetts juvenile property crime arrest rate represents a 20-year low, while the Massachusetts juvenile violent crime arrest rate represents a 54% decrease since its high of 58 in 1994 and 1995.

Figure 3-6. Massachusetts and United States part I juvenile arrest rates per 100,000 persons, 1992–2005



Source: Federal Bureau of Investigation, Uniform Crime Reports, *Crime in the United States*, Persons Arrested. Table 69 and Table 41.

Figure 3-7. Part I juvenile arrest rate (per 100,000 persons)* by type of arrest — Massachusetts, 1986–2005



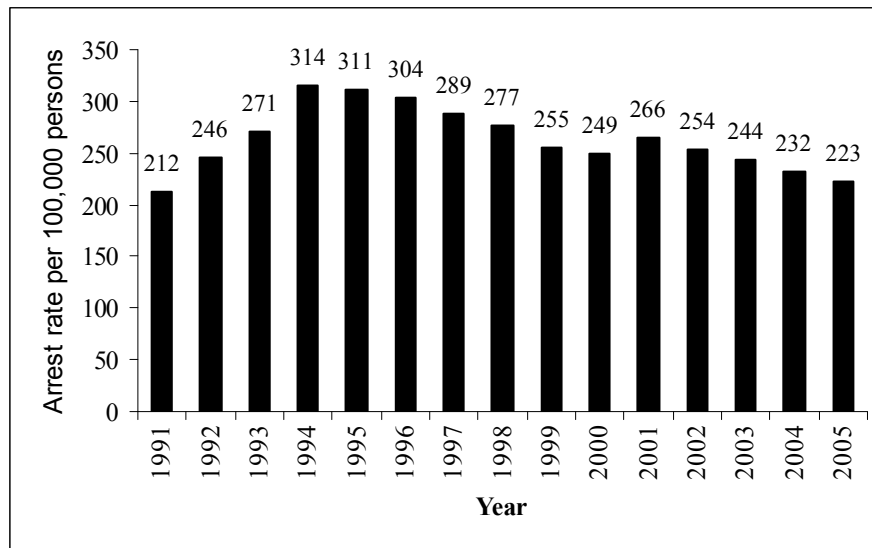
*Rate is based on total Massachusetts population (adult and juvenile). For this arrest data, juveniles are youth aged less than 18 years.
Source: FBI Uniform Crime Reports. *Crime in the United States, 1986–2005. Persons Arrested. Table 69.*

Part II Crime Arrests

Part II crimes include other assaults, forgery and counterfeiting, fraud, embezzlement, buying/possessing stolen property, vandalism, weapons carrying/possessing, prostitution, sex offenses excluding forcible rape, drug abuse violations, gambling, offenses against family/children, driving under the influence, liquor law violations, drunkenness, disorderly conduct, vagrancy and all other offenses (Siegel, 1995). They also include suspicion, curfew/loitering law violations, and runaways, which are status offenses.

- In 2005, there were 223 Part II juvenile arrests per 100,000 individuals in the general Massachusetts population (Federal Bureau of Investigation, 2005) (Figure 3-8). The Massachusetts Part II juvenile arrest rate has decreased 16% since the most recent high in 2001 and is now at its lowest since 1991.
- Over the past decade, there has been a decrease in arrest rates for certain Part II crimes and an increase in others. For example, from 1995 to 2005, the arrest rate for buying, receiving or possessing stolen property decreased 78%, the arrest rate for weapon carrying decreased 45%, the arrest rate for runaways decreased 76%, the arrest rate for disorderly conduct decreased 41%, the arrest rate for vandalism decreased 23%, the arrest rate for drunkenness decreased 45%, the arrest rate for liquor laws violation decreased 41%, and the arrest rate for drug abuse violations decreased 40%. Over the same time period, the arrest rate for other assaults increased 27% and the arrest rate for “all other offenses” increased 8%.

Figure 3-8. Part II arrest rates — Massachusetts, 1991–2005



Source: Uniform Crime Reports, *Crime in the United States*, Persons Arrested. Table 69.

Delinquent juveniles

In Massachusetts, juvenile delinquents are defined as individuals who are adjudicated delinquent as a result of violating a state law, a city ordinance, or a town by-law while they were aged at least 7 years but not yet seventeen years (Mass. Gen. Laws ch. 119, § 52). The oldest age for original juvenile court jurisdiction for a delinquency complaint/charge in Massachusetts is 16 years.⁷

- In 2005, there were 33,396 delinquency complaints issued by the Juvenile Court⁸ (Administrative Office of the Trial Court, 2004) (Figure 3-9).⁹ The number of delinquency complaints in 2005 was lower than during any time in at least the past 16 years and is 31% lower than the high in 1996. The 33,396 complaints in 2005 involved 13,804 juveniles in the Juvenile Court plus a much smaller number of juveniles in the District Courts (2005).

The *Department of Youth Services* (DYS) is the juvenile justice agency for the Commonwealth. DYS' mission is to protect the public and prevent crime by promoting positive change in the lives of youth committed to their custody. To implement its dual mandate of rehabilitation and public safety, the agency operates 102 programs, ranging from secure locked units to community-based services.

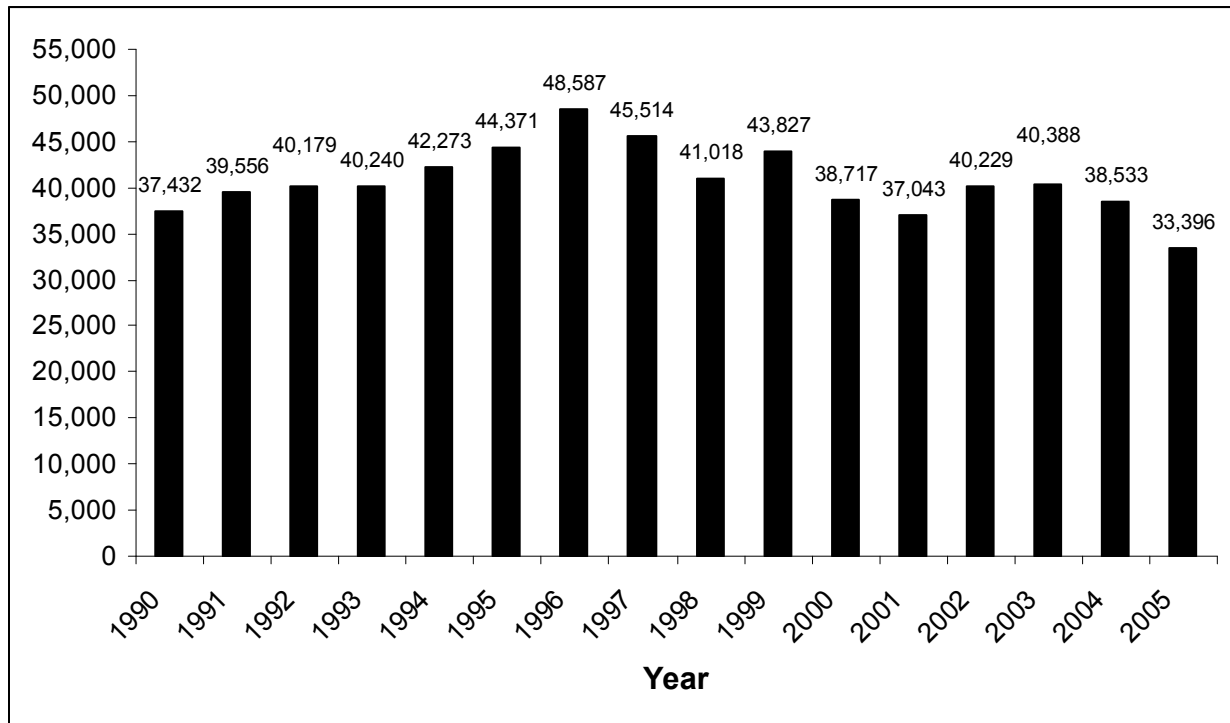
⁷ Nine other states also have 16 as their oldest age for original juvenile court jurisdiction. Three states have 15 as their oldest age for original juvenile court jurisdiction, and the remaining states have 17 as their oldest age for original juvenile court jurisdiction (Office of Juvenile Justice and Delinquency Prevention, 1999).

⁸ The "Juvenile Court" also refers to juvenile cases heard in District Court.

⁹ According to the Administrative Office of the Juvenile Court, "delinquency complaints" in Juvenile Court represent the same data point as "juvenile charge" in District Court. In this case "delinquency complaints" represents both delinquency complaints in the Juvenile Court and juvenile charges in the District Court. In 2004 there were 37,115 delinquency complaints issued by the Juvenile Court. Also in 2004, there were 1,418 total juvenile charges entered in District Court. The 2004 Juvenile Court complaints involved 15,374 juveniles, and the 2004 District Court charges involved 600 juveniles. However, these data representing the number of juveniles with delinquency complaints cannot be combined because the District Court double counts youth if they have two cases in one year while the Juvenile Court does not (Administrative Office of the Trial Court, n.d., District Court Department – Juvenile Filings).

- In 2005, 27% of the individuals with delinquency cases in Juvenile Court were female and 73% were male. There were more males than females for every one of the court's 32 offense categories, except for prostitution.

Figure 3-9. Number of delinquency complaints/charges — Massachusetts, 1990–2005



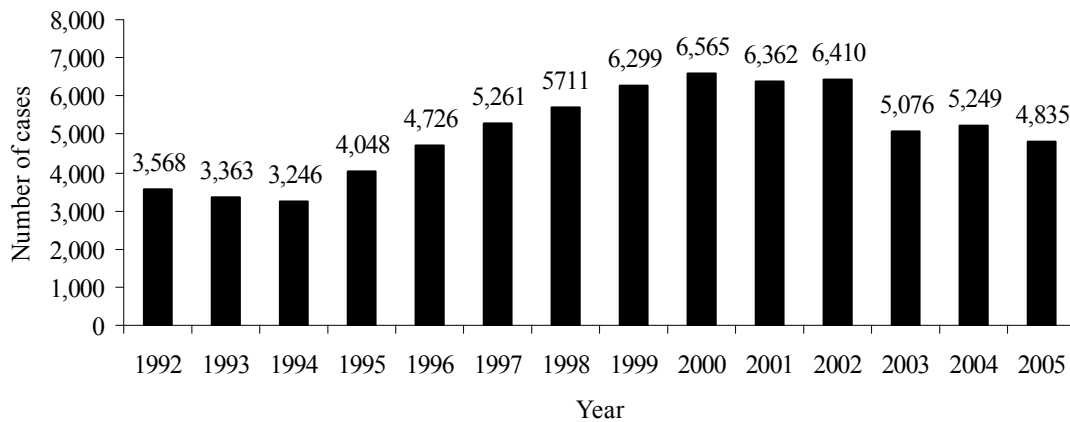
Source: Data from the Administrative Office of the Trial Court. Data presented includes delinquency complaints from the Juvenile Court and charges entered in District Court. Executive Office of Public Safety, 2007.

- The most common offenses in the Juvenile Court in 2005 were person offenses (34%) and property offenses (34%), followed by other public order offenses (21%), controlled substance offenses (9%), and motor vehicle offenses (3%) (Office of the Commissioner of Probation, 2006). While person offenses and property offenses were the two most common offenses for both males and females in 2005, there were differences in offenses by gender. For example, in 2005, approximately 43% of the females were sent to Juvenile Court for person offenses, while only 32% of the boys were sent to Juvenile Court for person offenses.

Probation

When juveniles are adjudicated delinquent, the two most common dispositions are probation and commitment to DYS. In 2005, there were 4,835 juveniles placed on risk/need probation in Massachusetts, 78% male and 22% female (Office of the Commissioner of Probation, 2006) (Figure 3-10). The total number of youth placed on risk/need probation has decreased 26% from a high of 6,565 in 2000 and is at its lowest level since 1996.

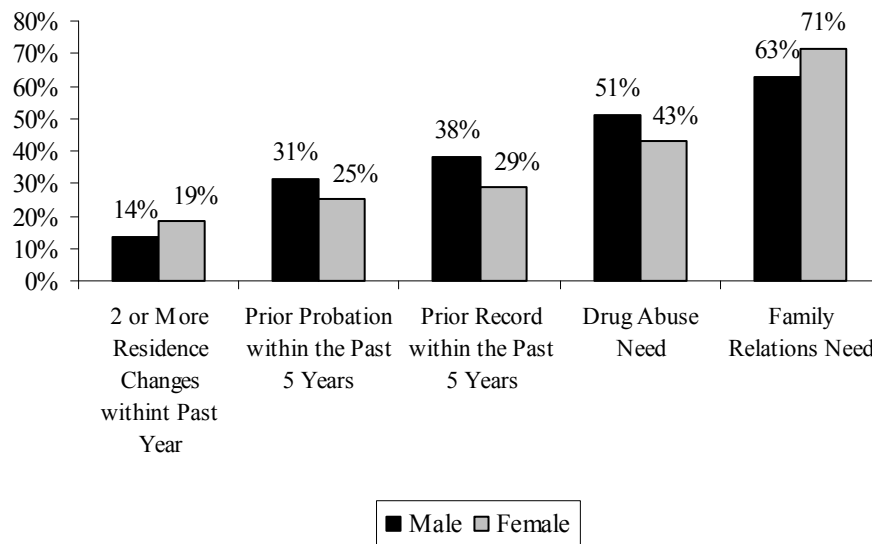
Figure 3-10. New risk/need probation cases — Massachusetts, 1992–2005



Data from the Office of the Commissioner of Probation. Chart compiled by the Executive Office of Public Safety.

- The majority of youth were placed on risk/need probation for person offenses. This has remained consistent since 1998 when person offenses surpassed property offenses as the top cause of probation placement. In 2005, 44% of the youth were placed on probation for person offenses, 32% for property offenses, 11% for controlled substance offenses, and 13% for other offenses, including 3% for motor vehicle offenses.
- According to the Probation Department, the majority of probationers in 2005, both male and female, had attitude problems (93%), school discipline problems (87%), home discipline problems (86%), peer relations problems (86%), social needs (85%), education needs (81%), counseling needs (73%), family relations needs (65%), substance abuse problems (60%), and were aged less than 15 years at first offense (54%). In addition, 36% had a prior record within the past five years, 30% had prior probations within the past five years, 15% had two or more resident changes within the past year, 38% had an alcohol abuse need, and 49% had a drug abuse need.
- While males and females were quite similar in their diagnosed problems and needs, there were some small variations. For example, male probationers were more likely than females to have had a prior record within the past five years, to have had prior probation within the past five years, and to have a drug abuse need (Figure 3-11). Females were more likely than males to have had two or more residence changes within the past year and to have a family-relations need.

Figure 3-11. Risks and needs of probationers by gender — Massachusetts, 2005



Source: Massachusetts Office of the Commissioner of Probation, compiled by the Executive Office of Public Safety.

Commitments to the Department of Youth Services

When youth are “committed to DYS” it means that they have been adjudicated a delinquent child on a complaint or adjudicated a youthful offender on an indictment, and, because of that adjudication, they will be in the legal custody of DYS until either age 18, 19 or 21 years. If a juvenile is charged as a delinquent, he or she will usually be committed until age 18 years. In the case of a child whose case is disposed of after he or she has attained his or her 18th birthday, he or she will be committed until age 19 years. If charged as a youthful offender, he or she could be committed until age 21 years.¹⁰ “Committed to DYS” does not necessarily mean living in a DYS facility. The continuum of care for a juvenile who is committed to DYS is: Assessment, Residential Phase, Hardware/Secure Treatment, Staff Secure Treatment, Community Phase/Day Reporting, and Discharge (MA DYS, 2004).

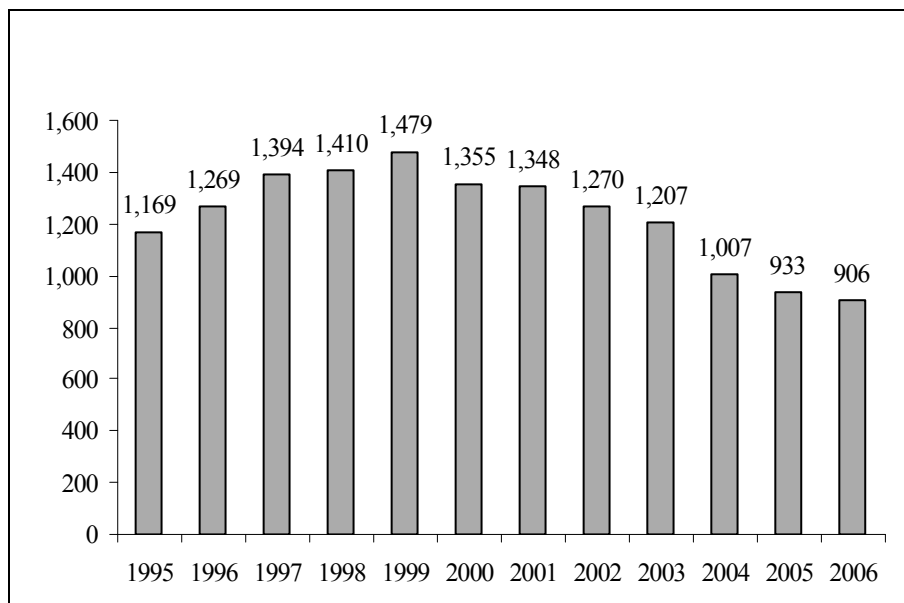
- In 2006, there were 906 youth newly committed to DYS, and there were 2,091 individuals in the total DYS committed population (MA DYS, 2006) (Figures 3-12, 3-13).¹¹ The number of new DYS commitments represents a decrease of 39% since its high of 1,479 in 1999. The number of individuals in the total DYS population on January 1, 2007 represents a decrease of 37% from its high of 3,278 in December 2001.
- The majority of the juveniles in the DYS committed population on January 1, 2007 were male (84%). The number of females in the DYS committed population on

¹⁰ Massachusetts General Law, Chapter 119, Section 58.

¹¹ This is a point-in-time count on January 1, 2007.

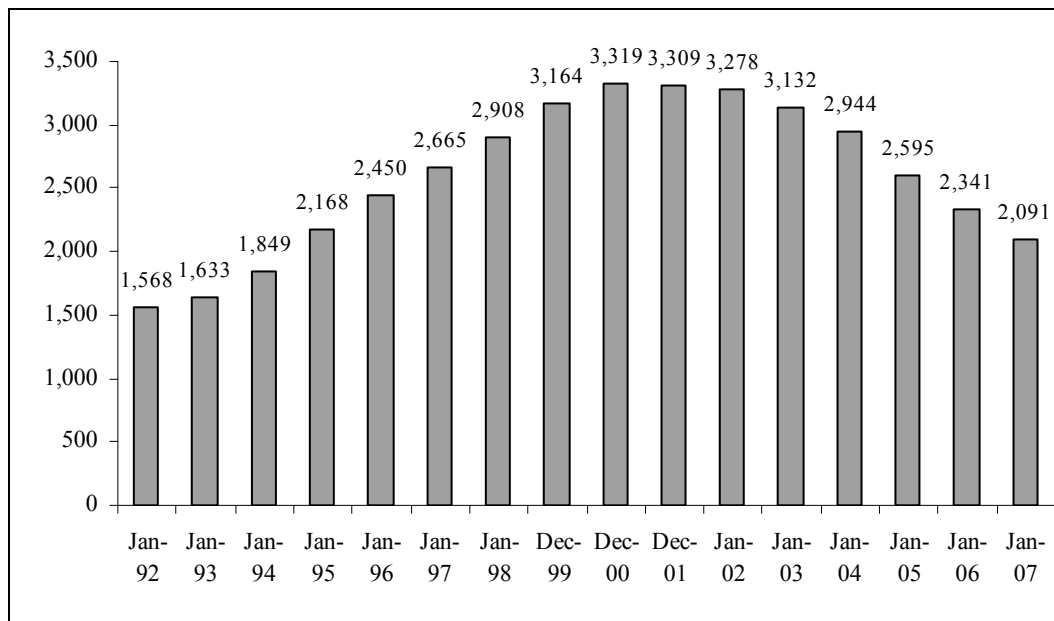
January 1, 2007 was the lowest in the past nine years and was 38% lower than it was at its peak in January 2003. The number of males in the DYS committed population on January 1, 2007 was the lowest in the past thirteen years and was 37% lower than its high in December 2001.

Figure 3-12. New commitments to Department of Youth Services — Massachusetts, 1995–2006



Source: Massachusetts Department of Youth Services, 2007

Figure 3-13. Department of Youth Services total committed caseload, 1992–2007



SAFETY FROM SEXUAL ASSAULT

In 2000, the crime of rape remained the least reported, least indicted, and least convicted of any major felony. Only 16 out of 100 victims report the crime to police, and only 1% of convicted rapists serve a prison term of more than one year (Boston Area Rape Crisis Center, 2002).

- The majority of young sexual assault victims have a relationship with the perpetrator. Survivors assaulted as children (age 0–12 years) identify a parent, sibling, or other relative as the perpetrator in more than half of reported assaults. Survivors assaulted as teenagers (age 13–19 years) identify friends and acquaintances as the most common perpetrator (MDPH, 2006).
- In 2007, 12% of high school students reported that someone has had sexual contact with them against their will during their lifetimes, including 7% of males and 18% of females (MYRBS, 2007).
- In 2005–2006, 17% of women aged 18–24 years report having ever experienced sexual violence. Among all women, respondents who reported a disability were twice as likely to report having experienced sexual violence (having sexual parts of the body touched without consent or attempted or completed penetration without consent) as those who did not report a disability (MBRFSS, 2005–2006).

HOMELESSNESS

Homelessness, which is a major risk factor in impeding the healthy development of youth in multiple domains discussed in *A Shared Vision*, is included here because of its fundamental relationship to the lack of a safe place for living. Homeless youth move frequently, have inconsistent school attendance, and have disrupted ties to communities and extended families (MDESE, 2007).

- As of the end of June 2007, there were 1,673 families in the Department of Transitional Assistance (DTA) shelters. These families include 1,546 children aged less than 6 years and 1,375 children aged 6 years and older (Emergency shelter includes structured family shelters as well as motel placements) (MDTA, 2007).
- The Massachusetts Department of Elementary and Secondary Education included a housing question on the past two administrations of the YRBS. In 2007, 5% of Massachusetts high school students fit the definition of homelessness (see Technical notes for definition of homelessness based on MYRBS). Homeless students were significantly more likely than their housed peers to experience all forms of violence and victimization and to report high levels of alcohol and drug use (MYRBS, 2007).

ENVIRONMENTAL SAFETY

Asthma

Asthma is one of the most common long-term diseases of childhood. Although the etiology of asthma is multifactorial, environmental factors clearly exacerbate symptoms. Indoor air allergens such as dust mites, cockroaches, pet dander, and mold have been implicated as triggering agents.

One Massachusetts study found a significantly higher rate of pediatric asthma among children who attended public elementary schools with indoor air quality (IAQ) problems than among those who attended schools that reported no IAQ problems (MDPH, 1999). Asthma results in substantial numbers of missed school days, emergency room visits, hospitalizations, and lost work days for parents.

Indoor Air Quality Initiatives

The Indoor Air Quality (IAQ) program of the MDPH Bureau of Environmental Health (BEH) conducts testing and evaluation of IAQ at schools and public or publicly accessible buildings. IAQ program staff visit between 100-120 buildings annually.

- In 2005, an estimated 8% of people nationwide (2.2 million) currently had asthma. Rates decreased with age: 9% of children aged 0–17 years currently had asthma compared with 4% of adults aged 18 years and older (National Health Interview Survey, 2005).
- The prevalence of childhood asthma increases with age. Twenty-one percent of middle school students and 23% of high school students reported having been told by a doctor or other health care professional that they have asthma (MYHS, 2007).
- Among Massachusetts adults, 13% of persons aged 18–24 years had been told that they currently have asthma and 18% had ever been told that they had asthma (BRFSS, 2006).

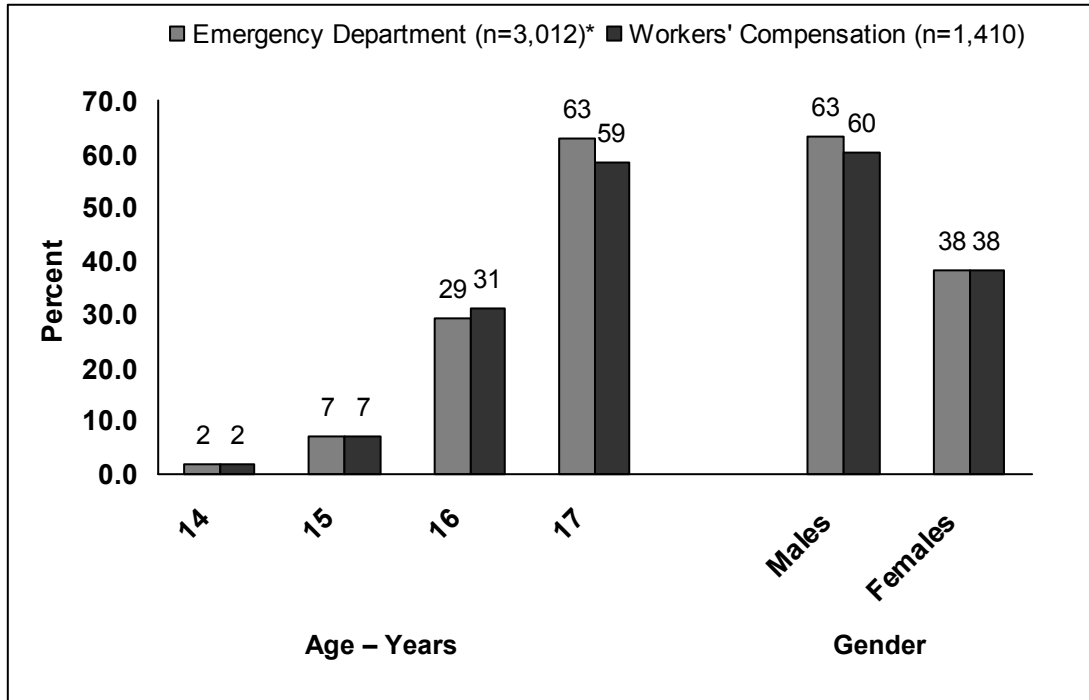
WORKPLACE SAFETY

Work is part of everyday life for millions of teens aged <18 years. More than 80% of teens in the United States hold jobs at some point during high school (National Research Council, Institute of Medicine, 1998). Work offers youth the opportunity to earn money and also to gain valuable work experience and skills. (See Goal 4 for more information on youth employment). These benefits are important, however work can also present health and safety risks. Nationwide, the occupational injury rate for teen workers is higher than that for adults. This is in part explained by the types of jobs in which teens work. Many of the common jobs in which youth are employed have higher than average risks for workers of all ages. Inexperience, inadequate supervision, and lack of training about how to work safely, as well as developmental factors, can increase on-the-job risks for youth. Young workers also may not be aware of their rights and their employers' responsibilities in the workplace.

- In 2005, 37% of Massachusetts youth aged 16–17 years (nearly, 72,000) were employed at any given point compared to 27% of youth aged 16–17 years nationwide (U.S. Bureau of Labor Statistics, 2005). These statistics do not include the many youth aged 14–15 years who also work.
- Six teens aged less than 18 years were fatally injured at work during 2000–2004 in Massachusetts (MDPH, Fatality Assessment Control and Evaluation project.)
- During 2000–2004, there were 1,410 workers' compensation claims filed by youth in Massachusetts for injuries resulting in more than five days of lost work – an average of 282 lost time injury claims a year.

- Male teens sustained more work-related injuries than females in Massachusetts, and close to 90% of injuries were sustained by youth aged 16–17 years (Figure 3-14).

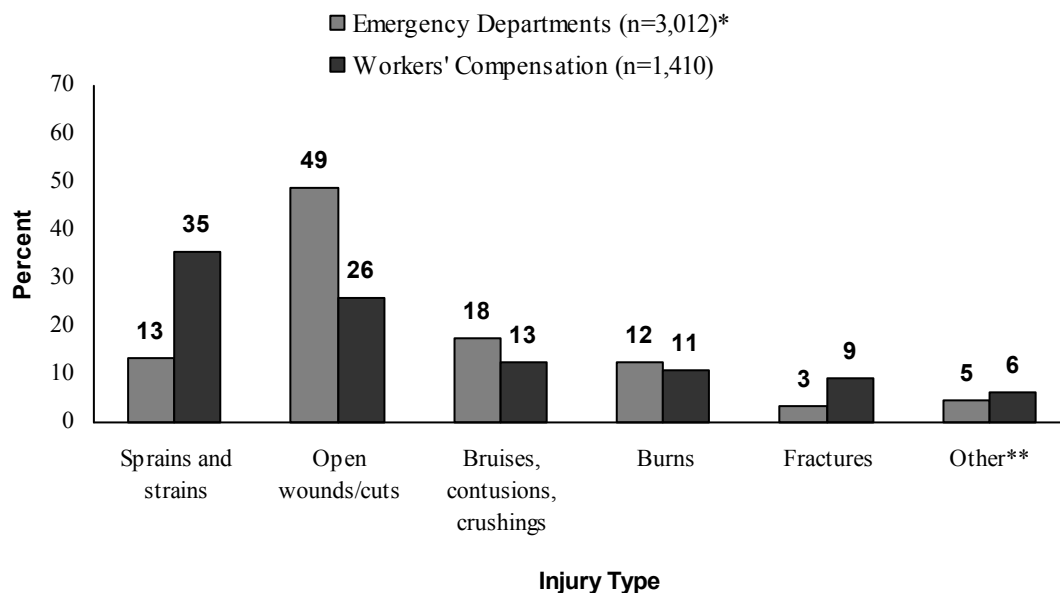
Figure 3-14. Occupational injuries to teens aged less than 18 years, by age, gender, and data source —Massachusetts, 2000–2004



Source: The emergency department data are from 2002–2004 only. Note: Seventeen cases were aged < 14 years, and gender was missing for 25 cases in the emergency department data.
Source: Teens at Work: Injury Surveillance and Prevention Project

- Open wounds were the most frequent type of work-related injury treated in Emergency Departments, accounting for 48% of the injury visits by working youth. In contrast, sprains and strains accounted for 35% of the injuries for which lost wage claims were filed by youth, and close to half of these involved the back (Figure 3-15).

Figure 3-15. Occupational injuries to teens aged < 18 years by injury type and data source — Massachusetts, 2000–2004



Source: * The emergency department data are from 2002–2004 only.

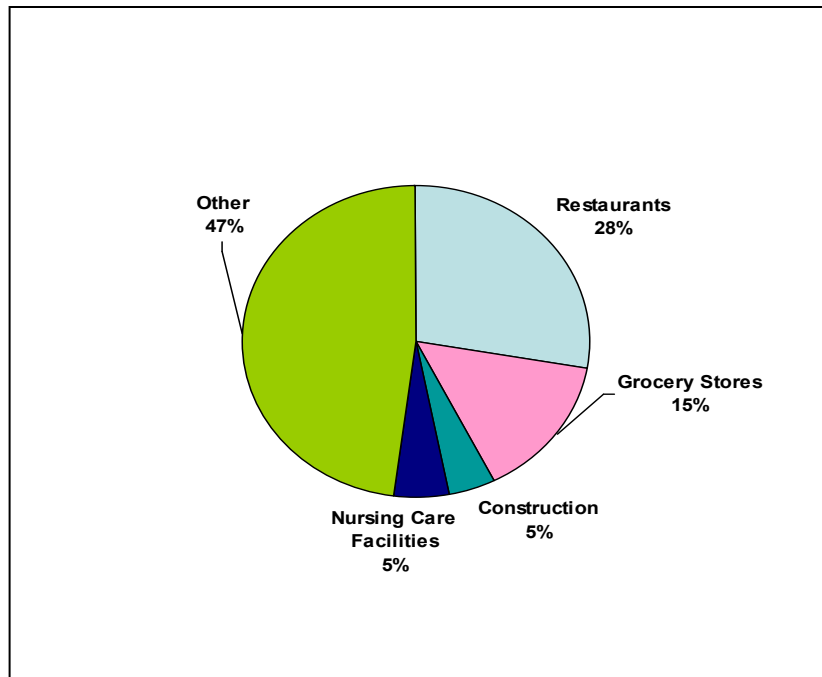
** There were a total of 25 amputations during this time period, which are included in “other.”

Note: The nature of the injury was missing for 67 cases in the emergency department data, and 175 cases in the Workers’ Compensation data.

Source: Teens at Work: Injury Surveillance and Prevention Project

- More Massachusetts youth work in restaurants than in any other single industry. Restaurants were also the most common type of workplace in which youth were injured, accounting for 28% of all injuries for which workers’ compensation claims were filed (Figure 3-16).

Figure 3-16. Occupational injuries to teens aged <18 years, by selected industry, workers' compensation —Massachusetts, 2000–2004

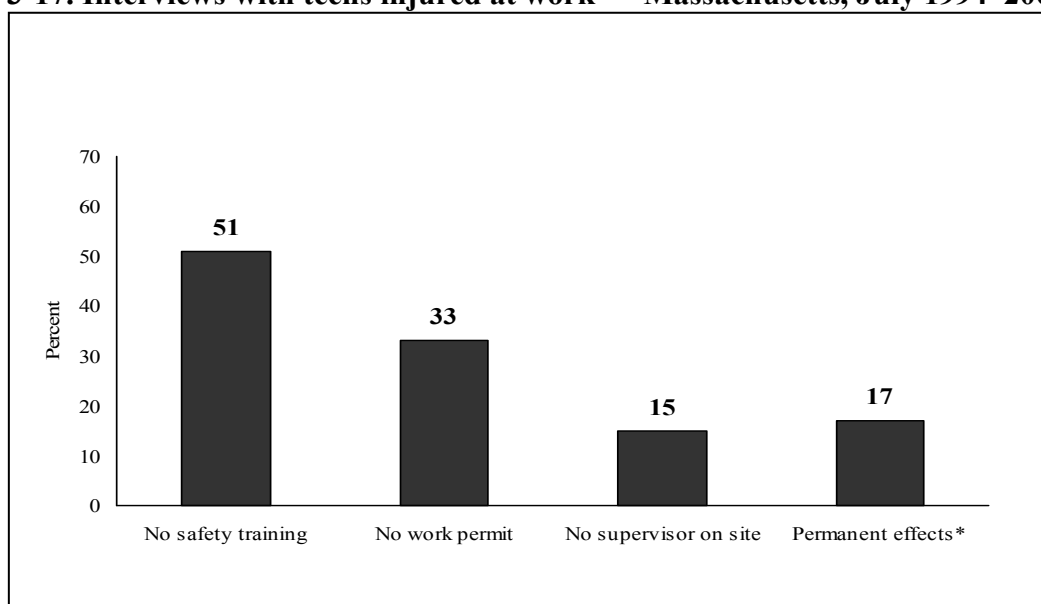


Note: Industry information was not available in the emergency department data. The industry was missing for 75 cases in the workers' compensation data.

Source: Teens at Work: Injury Surveillance and Prevention Project

- According to interviews with a sample of teens injured at work: (Figure 3-17).
 - Approximately half had no health and safety training;
 - Close to a third did not have required work-permits;
 - Seventeen percent anticipated permanent pain, limited sensation or loss of movement as a result of their injuries.

Figure 3-17. Interviews with teens injured at work — Massachusetts, July 1994–2003



*Anticipated permanent pain, limited sensation or loss of movement.

Source: Teens at Work: Injury Surveillance and Prevention Project

- One in four (25%) middle school students reported working for pay in the past 12 months. Among them, 6% were injured badly enough to seek medical treatment (MYHS, 2007).
- Over half (55%) of high school students reported working for pay in the past 12 months. Among them, 3% were injured badly enough to seek medical treatment (MYHS, 2007).

Healthy People 2010 Objective 20-2h: Adolescent Workers: Reduce work-related injuries resulting in medical treatment, lost time from work, or restricted work activity in adolescent workers.

Table 3-11. Number of injuries per 100 full-time workers aged 16–17 years — United States, 1997, 2003 and 2010 target

	U.S., 1997	U.S., 2003	HP2010 Target	Massachusetts
Injuries per 100 full-time workers aged 16–17 years	4.8	4.4	3.4	Data not available

Teens at Work Project

The Massachusetts Department of Public Health's (MDPH) Teens at Work: Injury Surveillance and Prevention Project (TAW) collects data on work-related injuries to teens aged less than 18 years from several sources. In 1992, Massachusetts public health code was changed to mandate that health care providers and hospitals report cases of work-related injuries to teens aged less than 18 years to MDPH. Since 1993, MDPH has tracked work-related injuries to teens using data from a sample of hospital Emergency Departments that actively report to TAW on a monthly basis and workers' compensation claims filed by teens for injuries resulting in five or more days of lost work. In 2002, the Massachusetts Division of Health Care Finance and Policy began collecting data on Emergency Department visits from all acute-care non-government hospitals in the Commonwealth. Since then TAW has used these data to identify work-related injuries to teens treated in Emergency Departments statewide.

TAW also conducts follow-up interviews with a sample of injured teens to learn more about their injuries and work experiences. All of these data are used to target intervention and prevention activities in the Commonwealth. The TAW Project is the only project of its kind in the country. For more information about TAW, visit the website www.mass.gov/dph/ohsp.

Child Labor Laws

The child labor laws establish legal work hours for teens aged less than 18 years and prohibit teens from doing work that is deemed too hazardous. They also require that all teens aged less than 18 years obtain work permits. Persons aged less than 14 years may not work, with a few exceptions such as babysitting, paper routes, farm work, and entertainment (with special permits).

There are both Federal and Massachusetts child labor laws and the more restrictive laws apply. For example, the Federal Child Labor Laws state that youth aged 17 years may drive a car for work under certain circumstances; however, the Massachusetts Child Labor Laws state that no youth aged 18 years or less may drive a car for work. In this instance, the state law applies because it prohibits all driving.

On January 3, 2007 significant amendments were made to the Massachusetts Child Labor Laws. Data from the Teens at Work project were used by the community in advocating for these changes. For a complete list of the child labor laws applicable in Massachusetts visit the Division of Occupational Safety's website at www.mass.gov/dos/youth.

Goal

4

All youth have access to educational and economic opportunity.

A Shared Vision:

All Massachusetts youth **grow up to be healthy**, caring and economically self-sufficient adults.

EDUCATIONAL OPPORTUNITY AND ACHIEVEMENT

Massachusetts residents have among the highest levels of educational attainment in the nation (U.S. Census Bureau, 2000). This intellectual resource is a major strength.

GRADES KINDERGARTEN–12

Enrollment

The majority of children and youth in Massachusetts attend public schools (Table 4-1).

Table 4-1. Grade Pre-Kindergarten–12 enrollment in public and private schools — Massachusetts, 2007–08 school year

Type of School	Number of Students	% of Total
Public School	962,766	88.5%
Private School	125,462	11.5%

Source: DESE, *School District Profiles –State Profile*, 2007–2008; Private school data from personal communication with Department of Elementary and Secondary Education.

The student population in grades kindergarten through twelve has become increasingly diverse over the past ten years in terms of race/ethnicity and primary language (Table 4-2).

**Table 4-2. Changes in grades K–12 public school enrollment
Massachusetts, 2003 and 2008**

Student Characteristic	2003	2008
Race/ethnicity:		
African-American	8.8%	8.1%
Asian	4.6%	4.9%
Hispanic	11.2%	13.9%
Native American	0.3%	0.3%
White	75.1%	70.8%
Special education	15.2%	16.9%
First language is not English	14.4%	15.1%
Limited English proficiency	5.2%	5.8%
Low-income	26.2%	29.5%
K–12 public school enrollment	983,313	962,766

Source: DESE, *School District Profiles –State Profile, 2007–2008*

- Fourth and eighth graders have been 1st or tied for 1st on all four examinations of the National Assessment of Educational Progress since 2005.
- The percentage of the class of 2007 who graduated in 4 years was 80.9% overall: 65.2% African Americans, 58.5% Latinos, 65.2% low income, 86.4% White, 83.7% Asian (DESE, 2008).

High School Completion

Educational attainment is highly correlated with income level. Individuals without a high school diploma earn only 70% of the earnings of high school graduates (Day and Newburger, 2002).

Healthy People 2010 Indicator: Increase high school completion.

In 2006, more than four out of five young adults in Massachusetts completed high school by age 24 years, somewhat higher than the national average, but still below the *HP2010* target (Table 4-3). Graduation rates continue to rise with increasing age into adulthood.

Table 4-3. Percentage of young adults aged 18–24 years old who have completed high school —Massachusetts and United States, 2006

Massachusetts	U.S.	HP2010 target
87.1%	82.0%	90%

Source: US Census Bureau, American Community Survey 2006

- In 2006, the median income for someone in Massachusetts with less than a high school education was \$21,795, and increased to \$30,908 with high school completion, and further to \$50,286 with a Bachelor's Degree. One in four Massachusetts residents aged 25 years or older with less than a high school degree lived in poverty (21.2%) compared to one in ten (10.1%) with a high school diploma (U.S. Census Bureau, 2006).
- More than one in four young adults with disabilities aged 18–24 years did not graduate from high school compared to 13% of their non-disabled peers (MBRFSS, 2003–05).
- Educational attainment is strongly related to disability status. Thirty-seven percent of adults without a high school education had disabilities, compared to 15.8% of college graduates (MBRFSS, 2003–05).

Student Performance Assessment

In 1998, the Massachusetts Department of Education – now known as the Department of Elementary and Secondary Education (DESE) – began implementation of the Massachusetts Comprehensive Assessment Systems (MCAS) tests for all students enrolled in public schools. Student test performance is reported according to four categories: Advanced, Proficient, Needs Improvement, and Warning/Failing (grade 10 only). Starting with the graduating class of 2003, students must perform at the Needs Improvement level or above on the grade 10 English Language Arts and Mathematics tests in order to earn a high school competency determination.

- Over the past six years of MCAS testing, the proportion of 10th graders whose performance level is Advanced has been variable in English Language Arts, but has consistently increased in Mathematics (Table 4-4).
- The proportion of students whose performance Needs Improvement or is Failing is greater for African American and Hispanic students than for other students (Figure 4-1).

Table 4-4. Percentage* of grade 10 students at each MCAS performance level¹² — Massachusetts, 2002–2007

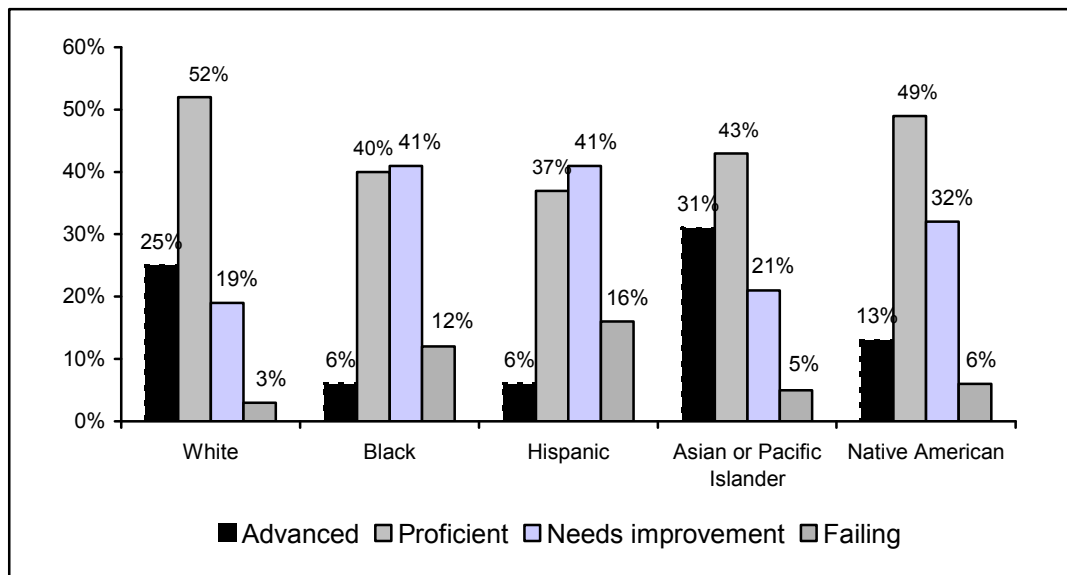
Performance Level	2002	2003	2004	2005	2006	2007
English Language Arts						
Advanced	19	20	19	23	16	22
Proficient	40	41	44	43	53	49
Needs Improvement	27	28	27	26	24	24
Failing	14	11	10	9	7	6
Mathematics						
Advanced	20	24	29	35	40	42
Proficient	24	27	28	27	27	27
Needs Improvement	31	29	28	24	21	22
Failing	25	20	14	13	12	9

*Percentages may not total 100 due to rounding.

Source: DESE, MCAS Report (District) for Grade 10 Students.

¹² See *Technical Notes* for further information on how denominator of students is calculated.

Figure 4-1. MCAS Performance level of 10th grade students, English and Language Arts by race/ethnicity — Massachusetts, 2007



Source: DESE, MCAS Report (District) for Grade 10 Students.

- Over the past five years of MCAS testing, the proportion of 7th graders with Proficient performance has more than doubled (Table 4-5).

Table 4-5. Percentage* of 7th grade students at each MCAS performance level¹³ Massachusetts, 2003–2007

Performance level	2003	2004	2005	2006	2007
English Language Arts					
Advanced	8	9	10	10	9
Proficient	27	59	57	55	60
Needs Improvement	28	25	26	26	23
Warning	7	7	7	9	8
Mathematics					
Advanced	**	**	**	12	15
Proficient	**	**	**	28	31
Needs Improvement	**	**	**	33	30
Warning	**	**	**	28	24

Percentages may not total 100 due to rounding.

** Mathematics module was not given to 7th grade students until 2006 administration.

Source: DESE, State Test Results – 2007.(available at <http://profiles.doe.mass.edu/home.asp?mode=o&view=tst&ot=0&o=0000&so=-&mcasyear=2007>).

School Dropouts

The Massachusetts high school dropout rate was 3.3% in 2005-06 and 3.8% in 2006-07 (Table 4-5). During the 2005–2006 school year, 22.6% of students who dropped out returned to school, graduated or received a GED by October 1, 2006 (DESE, Dropout Rates in Massachusetts Public

¹³ See *Technical Notes* for further information on how denominator of students is calculated.

Schools, 2006-2007). This represents a 75.9% increase in the number of returned dropouts. This increase is attributable to the ability of the DESE to use the GED completion database to identify students who passed the GED exam by October 1, 2006, whereas previously the DESE relied solely on district notification regarding students who received their GED.

**Table 4-5. Public School Dropout Information, Grade 9–12
Massachusetts, School Years 2000/01–2006/07**

Dropout Information	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07
Dropout Rate, Grade 9–12	3.5%	3.5%	3.3%	3.7%	3.8%	3.3%	3.8%
Number of Dropouts	9,380	8,422	9,389	10,633	11,145	9,910	11,436
Grade 9–12 Enrollment	271,700	273,912	281,939	288,329	293,399	296,511	252,519

Source: DESE, *Dropout Rates in Massachusetts Public Schools, 2006–2007*

- Dropout rates vary widely by race/ethnicity. In 2005–06, Hispanic students had the highest annual dropout rate at 7.9%, followed by 6.8% for African-American students. Asian students had a 2.2% dropout rate; Native American students had a rate of 5.4%; and white students, a rate of 2.3%.
- The dropout rate for male students was 3.8% and for female students 2.8%.
- For the 43,508 special education students in grades nine through twelve in 2005–06, the dropout rate was 5.1% compared to 3.0% for general education students. Students with limited English proficiency (LEP) and from low income families also have higher dropout rates compared to their classmates (9.5% LEP vs. 3.1% non-LEP; 5.5% low income vs. 2.6% non-low income)
- Using annual grade-specific dropout data, the DESE projects the cumulative dropout rate over the four-year high school period for each graduating class. For the class of 2009, the projected four-year dropout rate is 12.8%, slightly lower than the projected rates of 13–15% for the classes of 2006–2008.

Definitions of Dropout

Dropout: A student in grade nine through twelve who leaves school prior to graduation for reasons other than transfer to another school and who does not re-enroll by October 1 of the following school year

Dropout rate: The number of students who drop out over a one-year period, from July 1 to June 30, minus the number of return dropouts, divided by October 1 enrollment

POST-SECONDARY EDUCATION

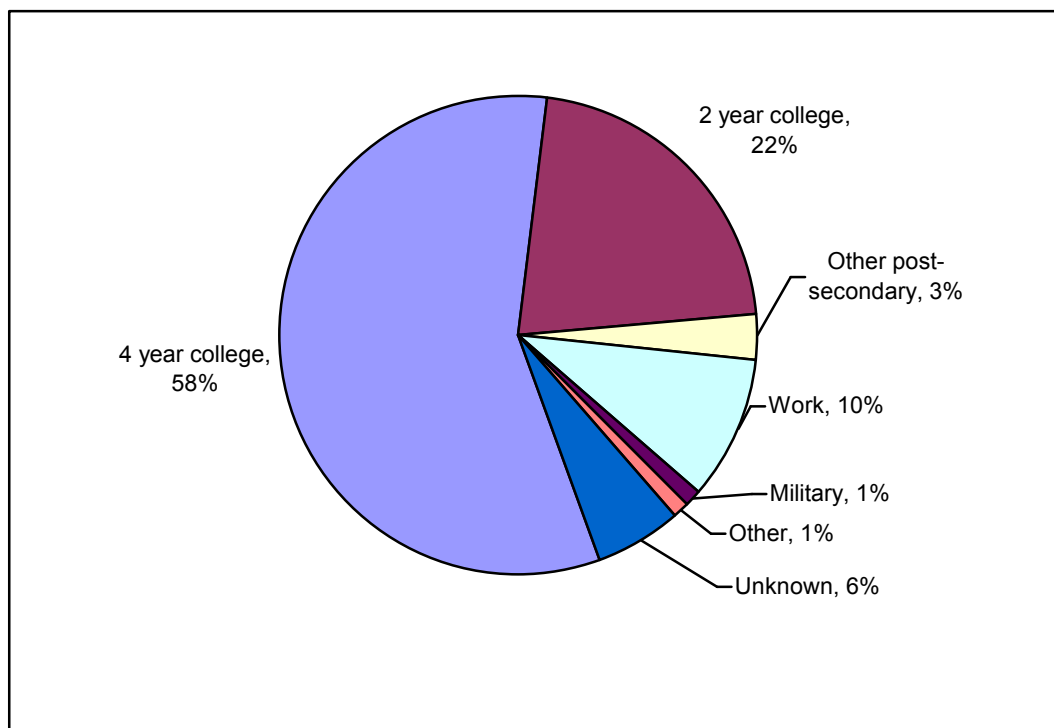
Post-secondary education contributes significantly to higher income levels. Individuals with a bachelor's level college degree have 150% the annual earnings of high school graduates (Day and Newburger, 2002).

Plans after High School

The proportion of graduating high school seniors who plan to continue their education has increased steadily over the last twenty years.

- For the Class of 2007, 80% of Massachusetts high school graduates plan to continue their education at a two- or four-year college (Figure 4-2), up from 53% in 1981.
- Ten percent of graduates planned to go directly to work, compared to 30% in 1981.

Figure 4-2. Post-High School plans of graduating seniors — Massachusetts, 2007



Source: DESE, *Plans of High School Graduates: Class of 2007*.

Transition Planning for Students with Disabilities

“While Massachusetts has many resources to promote transition from childhood home to independence, young people with disabilities still face major barriers to autonomy and independence...they have the same aspirations as their peers. They want to work, participate in recreation, and lead independent lives. Youth with disabilities, however, face barriers to independence in all these areas.”

- MDPH, Massachusetts Initiative for Youth with Disabilities, 2001.

Youth with disabilities and their parents identified a range of barriers impeding smooth transition to adult life, and needed supports in a 1997 needs assessment. These included overlapping but uncoordinated mechanisms for implementation of mandated transition planning; discontinuity between schools and systems that support adults with disabilities, inadequate preparation for adult life, lack of incentives or supports for early attention to transition, lack of communication and understanding between health care providers and both schools and community supports, lack of models for medical transition; and lack of capacity in the adult health care system to provide care that promotes autonomy (Timmons, 1997). Although ten years have elapsed since this needs assessment, many of these barriers remain.

Often times, parents and adolescents with disabilities are confused by multiple definitions regarding transition services including when special education entitlement services end and when eligibility for adult disabilities services begins. Much of this confusion is focused on a misunderstanding of two formal transition processes:

1. The **school transition planning process** required by the Individuals with Disabilities Education Act (IDEA) mandates that schools include goals, assessments and supports necessary for transition in a Transition Planning Form (TPF) to be maintained with the Individualized Educational Plan (IEP). For children with an IEP, this will mean that formal transition planning begins at age 15 years (Massachusetts Department of Elementary and Secondary Education, Special Education: Transition from School to Adult Life).
2. The Chapter 688 or “Turning 22” creates a documented need for adult services and supports for students with severe disabilities. Chapter 688 provides a two year coordinated planning process for students whose entitlements to special education services will end when they graduate from school or turn 22 years of age. Only students who receive services in accordance with an IEP and receive SSI/SSDI and/or are on the registry at the Massachusetts Commission for the Blind (MCB) are automatically eligible for Chapter 688. Other students who may be eligible are those students with severe disabilities who are in need of continued services and are unable to work 20 or more hours per week in competitive, non-sheltered, non-supported employment at the time they are ready to leave school. Also, students who receive services from the Department of Youth Services (DYS) or the Department of Children and Families and are on an IEP or a Section 504 Plan may be eligible. A referral must be made at least 2 years before the student is expected to graduate from school or turns 22 years of age. This 2 year planning period allows enough time for agencies to determine eligibility for adult services and to include the anticipated cost of services for the student in the budget request which is submitted to the Massachusetts Legislature each year. Chapter 688 is not a continuation of special education services and is not an entitlement to services. If a student meets the Chapter 688 eligibility requirements, an Individual Transition Plan (ITP) is required and written for each student. The ITP is developed in conjunction with school personnel, parents, students and the appropriate agencies. The delivery of services identified on the ITP is linked to adult agency eligibility and program availability that is dependent on funds allocated in the annual state budget (Massachusetts Department of Elementary and Secondary Education, Special Education: Chapter 688).

WORKFORCE AND LABOR MARKET OUTCOMES

The Pathways to Success by 21 initiative of the Commonwealth Corporation has developed a series of specific youth indicators – data that illustrate the composition of the population of vulnerable youth in Massachusetts. These indicators fall into five broad categories: (1) schooling indicators, (2) labor market indicators, (3) social indicators, (4) income indicators, and (5) parenting indicators. Several indicators were selected for inclusion in this report. The full series of P-21 data is available by sub-state region (the sixteen workforce investment areas) at www.commcorp.org/p21/datayouth.html.

Outcomes after High School. The actions of any youth after high school are important predictors of their long-term labor market attachment. In general, youth within this cohort have three options; school, work, or not in the labor market. It begins to get harder to clearly track early post-high school experiences, since many youth are enrolled in a postsecondary program while working full or part time. According to a study by the Center for Labor Market Studies, in 2000 about 72 percent of youth who had earned a high school diploma were enrolled in college or a postsecondary program. About 69 percent of out-of-school youth were working full time [note: The 88,008 youth who comprise this particular cohort represent about 17 percent of all youth aged 16–21 years in Massachusetts].

The most disconnected of all youth are those who were out-of-school (either having dropped out of high school, graduated with a diploma, or earned a GED) and who were jobless and not enrolled in any postsecondary program. More than 38,000 youth, about 7.7 percent of all 16-21 year olds, fell into this category.

Table 4-6. Post High School actions of youth aged 16–21 years — Massachusetts, 2000

	Total Youth in Cohort	Number	Percentage
Youth aged 16–21 years with a high school diploma or more enrolled in college	267,741	192,492	71.9%
Out-of-school youth aged 16 – 21 years who were working full time	88,008	60,725	69.0%
Youth aged 16–21 years who were out-of-school, jobless and not enrolled in a post high school program	498,546	38,325	7.7%

Source: Center for Labor Market Studies analysis of Census 2000 data.

Note: The term ‘out-of-school’ includes youth who had either dropped out of high school, earned a diploma, or earned a GED.

Labor Market Indicators. National longitudinal research has shown that early work experiences can help facilitate the transition from school to work and help keep economically disadvantaged youth in school. At the time of the 2000 Census, about 40 percent of every 100 in-school high school youth were employed, and about 66 percent of out-of-school teens in the state were employed, either part-time or full-time. The employment rates of out-of-school youth varied substantially by level of educational attainment, ethnicity, and family income. Only 49 percent of school dropouts were employed versus 73 percent of high school graduates and 80 percent of those youth who were enrolled in a post-secondary program.

Table 4-7. Employment Rates for youth aged 16–21 years — Massachusetts, 2000

	Number of youth	Number employed	Percentage employed
High school students	211,228	83,003	39.3%
Persons not enrolled in school	112,654	74,329	66.0%
High school dropouts who are not enrolled in an educational program	37,808	18,649	49.3%
High school graduates who are not enrolled in a postsecondary program	53,516	38,685	72.3%
Persons with a high school diploma or more enrolled in a postsecondary program	21,330	16,995	79.7%

Source: Center for Labor Market Studies analysis of Census 2000 data.

Income Status. Income is an additional important indicator of the outcomes of the Commonwealth's youth. Table 4-8 summarizes data regarding the poverty status of youth. About 19 percent of all youth had an income below 125 percent of the poverty line in 2000 (these data include youth who were the head of their own households as well as youth who resided with one or more parents whose income fell below the threshold). Almost 30 percent of all youth were in households that had an income below 200 percent of the poverty line.

Table 4-8. Poverty Status of Massachusetts Youth, 2000

	Total 16-21 Year Olds in Baseline	Number in Category	Percent in Category
16 – 21-year olds with income below 125 percent of poverty line, 2000	407,763	77,487	19.0%
16 – 21-year olds with income below 200 percent of poverty line, 2000	407,763	121,457	29.8%
16 – 21-year olds receiving public assistance income or Supplemental Security Income	499,310	9,261	1.9%

Source: Center for Labor Market Studies analysis of Census 2000 data.

Note: Poverty line is the threshold below which families or individuals are considered to be lacking the resources to meet the basic needs for healthy living; having insufficient income to provide the food, shelter and clothing needed to preserve health. The poverty line is set at approximately three times the annual cost of a nutritionally adequate diet. It varies by family size and is updated yearly to reflect changes in the consumer price index. Youth under the age of 18 were the most likely to be impoverished. In 2001 the poverty rate for minors in the United States was the highest in the industrialized world, with 14.8% of all minors and 30% of African American minors living below the poverty threshold. Additionally, the standard of living for those in the bottom 10% was lower in the U.S. than in any other developed nation except the United Kingdom. In 2006, poverty rate for minors in the United States was 21.9% - the highest child poverty rate in the developed world.

Workforce Preparation for Youth in Massachusetts

An important means of promoting positive youth workforce development and participation is the Commonwealth's implementation of the federal Workforce Investment Act (WIA).

Workforce Investment for Youth in Massachusetts

The federal Workforce Investment Act – acronym WIA – is designed to encourage greater streamlining and coordination of workforce development programs for youth, adults, dislocated workers, and persons with disabilities. WIA focuses on the community-based development of youth workforce investment *systems*, rather than on short-term interventions or categorical programs. It encourages communities to offer a broad range of coordinated services including assistance in academic and occupational learning, development of leadership skills, and preparation for further education or training, and eventual employment.

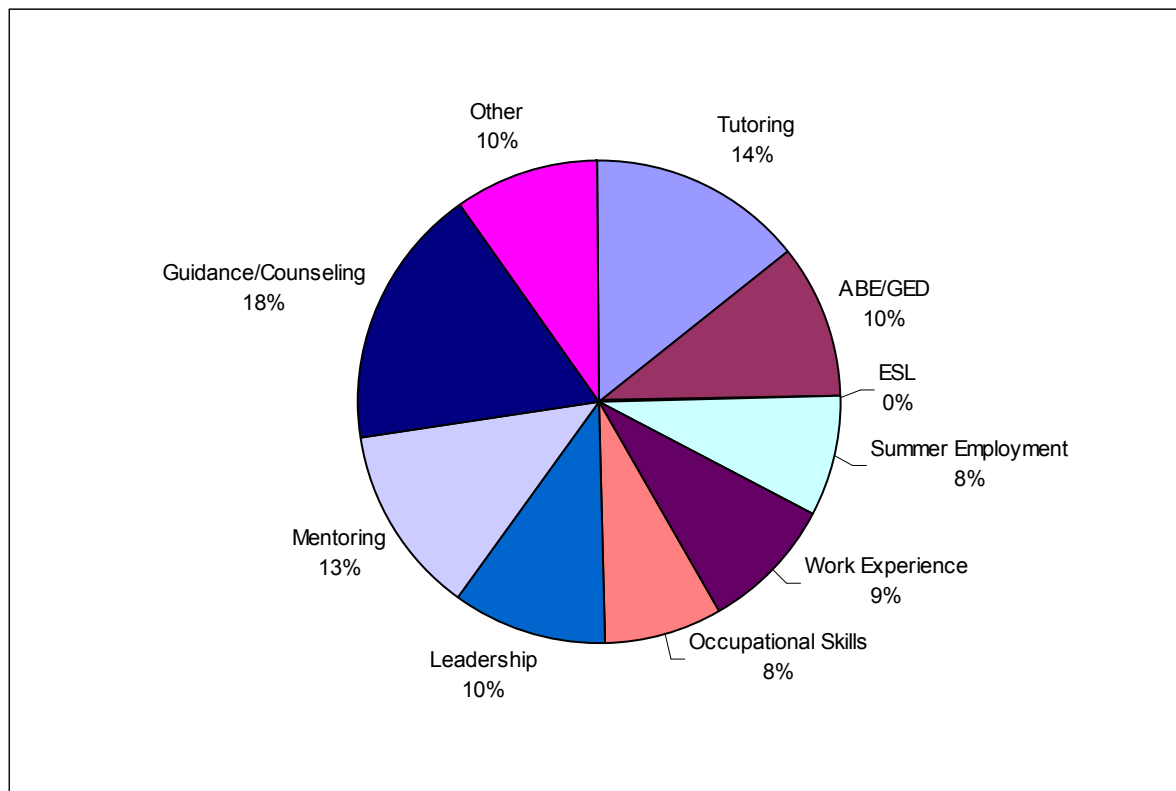
Program Elements: WIA youth services include ten program elements that comprise a menu of services to be provided in combination or alone, as needed during a youth's development. These include tutoring, study skills training, and instruction, alternative education; summer employment when linked to academic and occupational learning, paid and unpaid work experiences, occupational skills training, leadership development, supportive services, adult mentoring, follow-up services, and comprehensive guidance and counseling.

Eligibility: Low income youth, ages 14-21 who meet at least one of the following criteria are eligible for WIA-funded youth services; deficient in basic literacy skills, a school dropout, homeless, a runaway, or a foster child, pregnant or a parent, an offender; or requires additional assistance to complete an educational program, or to secure and hold employment.

Program implementation: The WIA youth services component is coordinated by sixteen local Youth Councils across Massachusetts, each of which is a subgroup of a WIA-mandated Local Workforce Investment Board (LWIB). The Youth Councils and LWIBs oversee the local process for providing the appropriate mix of services to individual participants. Each Youth Council awards WIA funds to youth service providers on a competitive basis, promotes a coherent youth development system across a wide range of agencies and youth service providers, recommends or establishes local youth policy, helps coordinate and integrate resources to leverage youth investment beyond the funds available through WIA, tracks outcomes of youth investment, including instructional gains, and success in getting and keeping employment, and advocates for changes in programs to improve quality and increase positive youth outcomes.

As of June 2007, approximately 3,500 Massachusetts youth were participating in WIA through one of ten program elements or services, with each youth participating in an average of four or more workforce development activities (Figures 4-3, and 4-4).

Figure 4-3. Distribution of WIA Title I Youth workforce development activities Massachusetts, June 2007

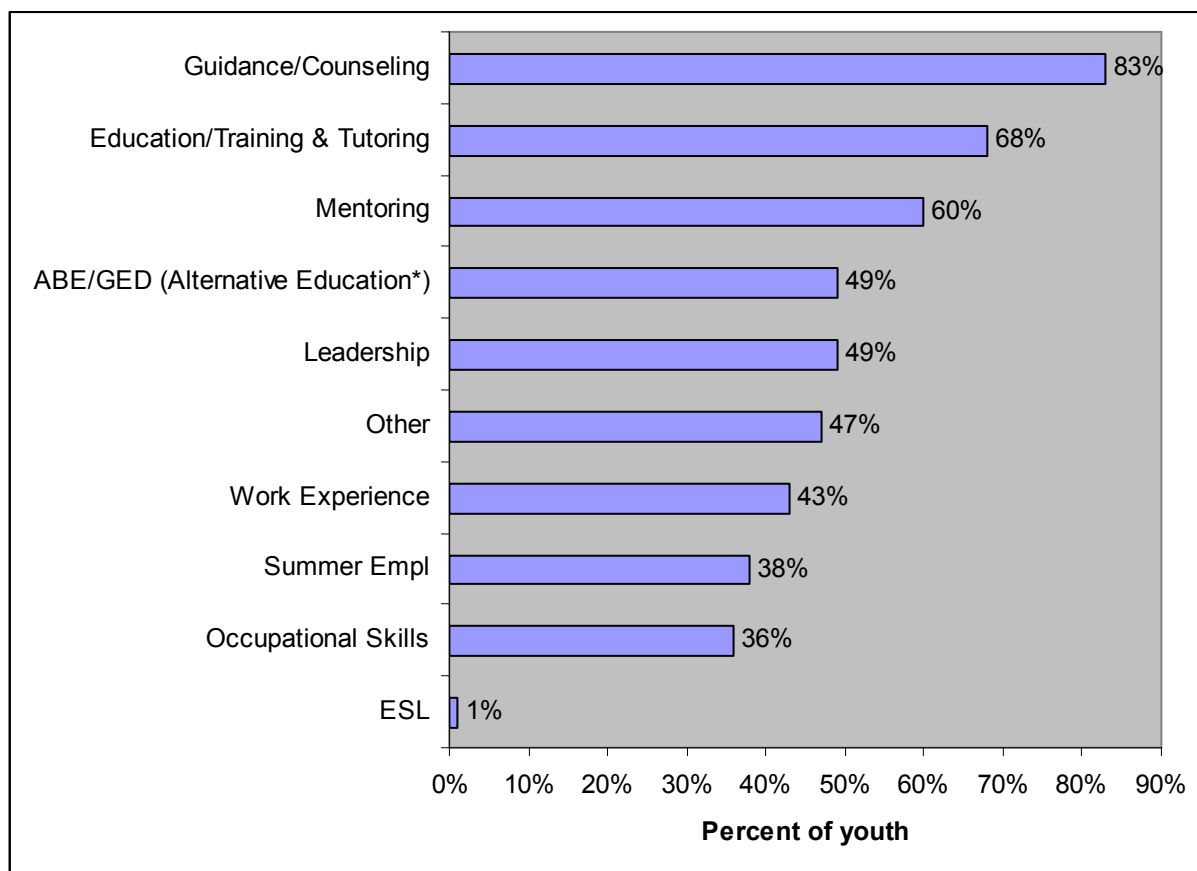


Source: Executive Office of Labor and Workforce Development, 2007
 Note: A total of 15,783 WIA-funded activities were offered to 3,334 youth.

According to the FY 2006 annual report of WIA, of the young adults, ages 18 and older, about 80% of those who exited the program entered into employment within the first quarter after leaving and were able to retain a job after six months. That outcome includes youth who were out-of school (82.6%) as well as those who were identified as an individual with a disability (79.7%) at program entry.

Of youth ages 14-18, 88% of those who completed WIA services attained the targeted skills goal. That rate was higher for individuals with disabilities (89.4%) and slightly lower for out of school youth (83.4%).

Figure 4-4. Percentage of youth receiving the 10 elements of service activity — Massachusetts, June 2007



* ABE =Adult Basic Education; GED = General Educational Development.

Summer Jobs– YouthWorks

The Commonwealth of Massachusetts funds a summer jobs program for low-income youth who reside in one of 22 cities and towns. Youth development literature suggests that early work experiences lead to a higher labor force participation in the future. Jobs are important for teen workers. Data shows that a lack of work experience will hamper future employability and wage growth, especially for youth who do not go on to college after finishing high school. However, the difficulties faced by the nation's out of school teens in securing employment, especially in major central cities and high poverty urban areas, have intensified since the end of the national labor market boom in early 2001. The percentage of teens (youth aged 16 – 19) who are in the labor force has declined dramatically from 57% in 1999 to only 44% in 2006. The employment rate of teens declined from 53% in 1999 to 39% in 2004. These changes are even larger for the state's larger cities, and among low-income families.

In 2006 (the most recent year in which program data are available), the state funded summer jobs for 2,891 eligible youth, representing more than \$3.25 million in youth wages. Table 4-9 summarizes the background characteristics of youth participants for the summer of 2006. Full data describing the results of this program are available at www.commcorp.org/youthworks/profiles.html.

Table 4-9. Risk category of YouthWorks participants, 2006

Risk Category	Number	% of Total
Poor academic performance or is a dropout	856	27.3%
Is a child of a single working parent	1,218	38.9%
Homeless or a runaway	17	0.5%
Has a disability	159	5.1%
Has aged out of foster care, or close to aging out	179	5.7%
Court-involved or has history of delinquency	191	6.1%
Is a teen parent	99	3.2%
Limited English skills or is a foreign immigrant	412	13.2%
Totals	3,131	

Source: Commonwealth Corporation

Note: Some youth are counted in more than one risk category

Goal

5

All youth have access to structured activities and opportunity for community service and civic participation.

A Shared Vision:

All Massachusetts youth grow up to be **healthy, caring and economically self-sufficient adults.**

“The research is clear. When young people have access to an array of supports and opportunities, they not only avoid engaging in self-destructive lifestyles, but more affirmatively, they achieve the healthy sense of identity and full range of competencies necessary to succeed as adults.” Zeldin, 1995

It is challenging to collect data on asset-based indicators involving youth, particularly so for access to structured activities and opportunities for community service and civic participation. Nonetheless, it is a critical area for examination. In particular, there are differences in resources available for structured activities and opportunities for community engagement across the state. Youth from more affluent areas may have an easier time finding after-school activities or ways to be involved in their neighborhoods than youth from communities that are economically struggling. There is also a lack of national data and clearly defined indicators for comparison.

The areas discussed below – out-of-school time programs and community service/service learning – are key components of Goal 5 for which limited quantitative data are available. We give a sampling of activities available in order to encourage more development in this area.

OUT-OF-SCHOOL TIME PROGRAMS

Structured after-school, before school, weekend, and vacation activities provide young people with opportunities to use their bodies and minds in positive ways to support one another and their communities.

- In 2007, more than half (52%) of Massachusetts high school students reported having taken part in after-school or weekend activities during the previous week, such as school clubs, music, art or drama lessons, activities at religious or other faith-based organizations, or other supervised activities. Participation was more common among female than male students (57% vs. 47%), and was highest among Black students (58%) compared to Asian (55%), White (53%) and Hispanic students (39%). Twelfth graders (56%) were more likely to take part in after-school or weekend activities than 9th graders (50%) (MYRBS, 2007).

EXAMPLES OF OUT-OF-SCHOOL-TIME PROGRAMS

There are many out-of-school-time programs working with youth in Massachusetts. Three examples that can be found in many communities across the Commonwealth are Girl Scouts, Boy Scouts and Boys and Girls Clubs:

Girl Scouts

“Girl Scouts of the USA is the world’s preeminent organization dedicated solely to girls—all girls—where, in an accepting and nurturing environment, girls build character and skills for success in the real world. In partnership with committed adult volunteers, girls develop qualities that will serve them all their lives, like leadership, strong values, social conscience, and conviction about their own potential and self-worth.” Girl Scouts, 2007

- There are six Girl Scout Councils in Massachusetts. In 2006, 65,227 girls aged 5–17 years and 23,027 girls aged 18 years and older participated in the Girl Scouts (Girl Scouts of the USA, 2006 Annual Report).

Boy Scouts

- *“The mission of the Boston Minuteman Council, Boy Scouts of America is to provide character development, citizenship training, growth in physical and mental fitness, and leadership opportunities for the young people of the Boston metropolitan area. We pride ourselves on the diversity of our members, and we are committed to providing young people with an educational and stimulating environment in which to learn and grow. Through the Scout Oath and Law, we pledge to respect all people and to defend the rights of others. Bias, intolerance and unlawful discrimination are unacceptable within the ranks of the Boston Minuteman Council” - Boston Minuteman Council, 2007*
- The Boston Minuteman Council serves 12,000 youth in the Greater Boston area. More than 3,500 adult volunteers currently participate in the council to help provide a safe, fun and educational program for our young people. For more information, please call 617-615-0004 or visit them on the web at www.bsaboston.org.

Boys and Girls Clubs

“Club programs and services promote and enhance the development of boys and girls by instilling a sense of competence, usefulness, belonging and influence. Boys & Girls Clubs are a safe place to learn and grow – all while having fun. It is truly The Positive Place For Kids” - Boys and Girls Club Massachusetts Annual Report 2000.

- In 2007, there were 84,307 registered members of Massachusetts Boys and Girls Clubs, of whom 58% were male. In addition, there were 104,392 nonmember youth served. Among all youth served, 53% were Caucasian, 22% Hispanic, 16% African-American, 7% Multi-racial, and 3% Asian (Boys and Girls Club of America, Massachusetts Annual Report Summary, 2007).

COMMUNITY SERVICE AND SERVICE LEARNING

- In 2007, 45% of Massachusetts high school students reported having spent at least one hour in the past month doing volunteer work or community service. Participation was more common among female than male students (50% vs. 41%), and was highest among Asian students (51%) compared with White, non-Hispanic (48%), Black, non-Hispanic (40%) and Hispanic students (37%). More twelfth graders (53%) reported engaging in volunteer work or community services than students in other grades (9th graders: 41%; 10th graders: 45%; 11th graders: 44%) (MYRBS, 2007).

Massachusetts Department of Elementary and Secondary Education: Learn and Serve America Program

“Service-learning combines service to the community with student learning in a way that improves both the student and the community... A national study of Learn and Serve America programs suggests that effective service-learning programs improve academic grades, increase attendance in school, and develop personal and social responsibility. Whether the goal is academic improvement, personal development, or both, students learn critical thinking, communication, teamwork, civic responsibility, mathematical reasoning, problem solving, public speaking, vocational skills, computer skills, scientific method, research skills, and analysis.” - Corporation for National and Community Service, 2002

The Massachusetts Department of Elementary and Secondary Education, through federal grants from Learn and Serve America (an office of the Corporation for National and Community Service), funds school districts to implement and institutionalize community service-learning. Grant-funded activities include professional development for high-quality service-learning, teacher stipends for curriculum and project development, materials and supplies for implementing projects, and convening of Service-Learning Advisory Committees to support the development of policies and practices that serve to sustaining service-learning programs.

In 2006–2007, 62 grants to 46 school districts engaged nearly 50,000 students in thousands of service-learning projects. Students in grades K-12 implemented projects addressing community needs like hunger and homelessness, environmental conservation, elder affairs, and risky behaviors among teens. These projects were connected to learning standards in math, English/Language Arts, social studies, science, arts, and/or foreign languages.

The Massachusetts Department of Elementary and Secondary Education hosts an annual statewide service-learning conference each spring that convenes nearly 300 students, educators, and community partners to share promising strategies to implement and sustain service-learning. Networking sessions and additional workshops are provided regionally throughout the year. For more information about these programs visit: www.doe.mass.edu/csl.

With community service-learning, students learn and develop through active participation in thoughtfully organized service that is integrated into and enhances the academic curriculum, is conducted in and meets the needs of the community and school, builds and extends school-community partnerships, helps foster citizenship skills of students, and includes structured time for students to reflect on their service experience.

Massachusetts has many service learning and community service program opportunities for youth in both the private and public sector. Some of the key programs are described below.

VOLUNTARY SECTOR INITIATIVES

Massachusetts Service Alliance

“The Massachusetts Service Alliance, established in 1991, is a private, nonprofit organization that serves as the state commission on community service and volunteerism. Its mission is to service and volunteerism by creating partnerships that maximize resources, expertise, capacity, and impact.”

-Massachusetts Service Alliance, 2007

- In 2007, Massachusetts Service Alliance (MSA), in partnership with the Massachusetts Mentoring Program (MMP), held the first ever, “Youth Mentoring Day,” an event held to celebrate National Mentoring Month. This event, which took place at the Massachusetts State House in Boston, was held to help kick off youth advocacy as well as maintain state investment in youth mentoring. For further information please contact Beth McGuinness at bmcguinness@mass-service.org or Molly Goggin at mgoggin@mass.org.
- In 2007, the MSA awarded a grant to the Massachusetts Campus Compact for their new program which is the College Access Fellowship Program. This program is designed to enable student leaders to take action in promoting college access for under-represented youth. The elected student representatives are chosen to work closely with community-based organizations to map out college access needs and resources as well as present recommendations for change.

AmeriCorps

AmeriCorps is a national network of programs that engages nearly 75,000 Americans each year in service to meet critical needs in education, the environment, public safety, homeland security, and other areas. AmeriCorps members, who must commit for one year, earn education awards and can receive a modest living stipend in exchange for their time and service. By participating in AmeriCorps, members can learn new skills, take on challenging responsibilities, and join a national network of people committed to service. About 80% of the members of AmeriCorps are aged less than 24 years. In FY07, there were 22 AmeriCorps programs across Massachusetts. For more information on AmeriCorps opportunities in Massachusetts, go to http://www.americorps.org/about/role_impact/state_profiles_detail.asp?tbl_profiles_state=MA.

Mass Advocates Standing Strong

Mass Advocates Standing Strong (MASS) is a statewide advocacy organization that was founded and continues to be operated by people with cognitive and developmental disabilities. The

mission of MASS is to empower self advocates through education in order to help them make choices which will improve and enrich their lives. The membership is diverse numbering individuals with varying levels of disabilities among its ranks as well as different age groups, including young adults.

The Center for Young Women's Health at Children's Hospital Boston Youth Advisory Program

The three diverse Center for Young Women's Health (CYWH) Youth Advisors have given numerous presentations to more than 50 community groups over the years on topics such as nutrition and physical activity, teen dating violence, internet safety, back to school blues, and healthy relationships. This past year, they presented to youth groups at the Hyde Park YMCA, Mattapan Community Health Center, South Boston Neighborhood Center, Tobin Community Health Center, Garfield Middle School in Revere, Casa Myrna-STAR, and Cambridge Action Project. As part of the Healthy Lifestyle project, they have mentored and trained peer leaders in the community so that they can deliver presentations on nutrition and fitness. The Youth Advisors also present "Conversations," a monthly interactive educational series that offers workshops and mini health fairs to teens and youth agencies. Resource tables are staffed by CYWH staff, and workshops are led by professionals on topics such as HIV Awareness, dating violence prevention, and resources for teens with disabilities. For more information go to www.youngwomenshealth.org.

STATE AGENCY INITIATIVES

Department of Elementary and Secondary Education: State Student Advisory Council (State SAC)

The State Student Advisory Council (State SAC) is a peer-elected group of students who represent student concerns to the Massachusetts Board of Education. Established by the Massachusetts Legislature in 1971 as one of the first organizations to provide for direct student involvement in statewide educational policy, the State SAC conducts advocacy around student rights, serves as a communication network to disseminate information to secondary school students statewide, and advises the Board of Education on a wide range of educational decisions. The student chairperson of the State SAC serves as a full voting member of the Board.

The State SAC is composed of five regional councils and a state council. Every secondary school must elect two delegates to a regional council, which then elects members to the state council. The regional councils also carry out projects to make changes in local schools.

Department of Public Health: Peer Leadership Programs

The Massachusetts Department of Public Health (MDPH) funds youth programs in different health promotion areas that utilize participatory, peer-leadership models. These include substance abuse, teen pregnancy prevention, and tobacco control.

- In fiscal year 2006, the Bureau of Substance Abuse Services funded 28 evidence-based community youth programs with one or more of the following programmatic objectives; youth development, student assistance, community organizing, court diversion, and street outreach. Using community health workers and peer leaders, these programs made 49,509 contacts with at-risk youth through more than 7,401 activities including information dissemination, social norm campaigns, education, interactive youth outreach, ongoing

groups, workshops, alternative activities and events, mentoring, screening and crisis intervention (MDPH, Bureau of Substance Abuse Services, 2006).

- The Teen Pregnancy Prevention Initiatives in the Bureau of Community Health Access and Promotion are science-based teen pregnancy prevention programs, with community-based agencies and health centers funded in the 20 communities with the highest teen birth rates. In 2005, approximately 153 of approximately 9,500 youth served through these programs were peer leaders (MDPH, Bureau of Family and Community Health, 2006).
- The Massachusetts Tobacco Control Program funds the Youth Action Initiative – a project of The Medical Foundation – to serve as the catalyst for youth tobacco prevention activities throughout the Commonwealth. In fiscal year 2007, approximately 650 peer leaders participated in community-based tobacco prevention activities funded by 45 mini-grants. The first annual film-shorts contest involved over 150 high school students in developing creative anti-tobacco messages. Six regional youth advisory groups will be established in fiscal year 2008. In August 2007, a youth-centered interactive website - The 84.org - was launched to connect youth leaders around the Commonwealth. A variety of opportunities are available to all high school and middle school students to become part of The 84, the smoke-free majority.

Department of Developmental Services: Urban Youth Collaborative Program

The Urban Youth Collaborative Program (UYCP) provides employment opportunities for young adults aged 16 to 24 years from various communities throughout the Commonwealth. Currently there are twenty different coordinating sites offering internship placements. During the summer of 2007 more than 300 interns worked at Department of Developmental Services (DDS) sites across the state to assist in the care of individuals with developmental disabilities. The UYCP offers the interns the opportunity to gain work experience as well as peak their interest in continuing in the field of human services. This is the 16th year of DDS' participation in the UYCP and in that time more than 2,000 interns have provided assistance with social and recreational activities for persons with disabilities. UYCP promotes collaboration among diverse ethnic communities, high schools, colleges, human service providers and DMR.

YOUTH COUNCIL INITIATIVES

Many communities and organizations across the Commonwealth – including the Governor's office – are using Youth Councils to actively engage youth in program planning, decision-making, peer training, advising, funding, and policy. By contributing to their communities, youth are not only lending their skills, insight and talents, they are also building the competencies and skills necessary for successful adolescent and adult life. The following are a few of the exemplary youth councils in Massachusetts:

The Governor's Statewide Youth Council is one part of Governor Deval Patrick's commitment to engaging all citizens of the Commonwealth in their communities and their government. The Youth Council initiative encourages and motivates young people to be involved in their communities and to participate in problem solving through assuming leadership and planning roles. Governor Patrick announced the members of the Council in September 2008. The Youth Council will focus on the Governor's priorities including, but not limited to civic engagement,

youth violence and education, advising the Governor as representatives of all Massachusetts young people.

The purpose of the Youth Council:

- To give young people access to the Governor
- To increase youth participation in government
- To give young people a significant voice in the decision making process
- For young people to develop leadership skills and become active citizens
- To create relationships between youth and adult leaders throughout the state

The Executive Office of Health and Human Services, in coordination with the Governor's Office of Community Affairs, oversees council meetings and activities.

The Youth AIDS Advisory Panel (YAAP), established in 1998, is a fifteen-member panel of youth who represent the regional and epidemiologic demographics of the HIV/AIDS epidemic in Massachusetts. The purpose of the YAAP is to advise the Massachusetts Department of Public Health HIV/AIDS Bureau (HAB) on effective interventions and youth populations needing prevention services. The YAAP also advises the HAB on emerging trends and public policy related to youth and family needs. For more information about the YAAP, please contact Ed DeBortoli at Ed.Debortoli@state.ma.us

The Lawrence Teen Council, sponsored by the Lawrence Teen Coalition and with the support of the City of Lawrence, is comprised of local high school students elected to represent the interests of Lawrence youth. They provide input to local and state political leaders and others on youth-related issues. The Lawrence City Council also uses the Lawrence Teen Council as an advisory group and hosts its meetings in the City Council chambers. The Lawrence Teen Coalition sponsors a three day intensive youth leadership institute for teen councilors and other high school aged youth, using their certified trainers under the Points of Light Youth Leadership Institute. For further information, link to <http://www.glcac.org/TeenCoalition/challenge.html> and go to Teen Council, or email cparadiso@glcac.org.

The New Bedford Mayor's Youth Council, open to students in grades 8–12, was created to be the eyes, ears, and voice of the city youth in an advisory capacity to the mayor and city government. The council, a program of the YWCA Southeastern Massachusetts in partnership with the City of New Bedford Office of Human Services, assists city officials in the development of community projects and issues from the youth perspective. For further information, call Pam Pollack, program director at 508-965-6027.

Northern Berkshire UNITY (United, Neighboring, Interdependent, Trusted Youth) is a youth development program of the Northern Berkshire Community Coalition. Created in 1994 as a forum for youth to talk about and act on issues of their choice, UNITY promotes youth expression, development, empowerment, and involvement through a variety of arts and leadership activities that feature youth/adult collaboration. The CommUNITY Arts offerings from UNITY provide opportunities such as a teen-led coffeehouse/performance series (The Groove) and middle and high school creative writing workshops. UNITY's Youth Leadership

Program is a 9 month leadership training initiative that encourages teenagers to become leaders in their own lives, their schools, and their communities through student development of original service projects. Other UNITY projects include Spice Up Your County (a grant contest for high school students), co-sponsoring the youth-designed Berkshire Youth Development Conference, and organizing the Northern Berkshire Youth Collaborative (a monthly meeting of youth work professionals). For more information, visit nbccoalition.org or email kmerrigan@nbccoalition.org.

The **Violence Intervention and Prevention Team (VIP)**, part of the Haverhill Community Violence Coalition (HCVC), is a group of highly motivated and dedicated students, grades 9-12, trying to make a difference in our schools and community. They serve as positive role models for peers, and support and participate in HCVC activities. Students develop and implement activities and peer-led workshops, do community outreach in neighborhoods, and are helping to establish an after school drop-in center that will include tutoring, computer activities, dance, art, music and peer counseling. For further information, contact Carol Ireland at cire109@aol.com, or link to www.hcvcinc.org.

Glossary

Adequate prenatal care

The Adequacy of Prenatal Care Utilization Index, also known as the Kotelchuck Index, has five categories – adequate intensive, adequate basic, intermediate, inadequate, and unknown – which are based on the month of the pregnancy in which prenatal care began and the percentage of expected prenatal care visits for the time period during which a woman receives prenatal care services. See http://www.mchlibrary.info/databases/HSNRCPDFs/Overview_APCUIIndex.pdf for more information. Please note that in the 2003 version of *A Shared Vision* adequacy of prenatal care was measured using the Kessner Index.

Asset-based approach

The asset-based approach sees youth and young adults as resources and agents of change, rather than problems to be fixed or passive consumers of services. Further, the asset-based approach identifies assets and resiliency factors youth need to achieve healthy adulthood, and sets the goals as “building assets” rather than “reducing risks.”

Deficit-Focused

Typically public health and youth programs have focused on problems and risk factors for youth and young adults. Programs that are “deficit-focused” are focused on what is wrong with youth and young adults, and what needs to be fixed.

Healthy People 2010

Healthy People 2010 is a set of health objectives for the United States to achieve over the first decade of this century. It can be used by many different people, states, communities, professional organizations, and others to help them develop programs to improve health.

Healthy People 2010 builds on initiatives pursued over the past two decades. The 1979 Surgeon General's Report, *Healthy People*, and *Healthy People 2000: National Health Promotion and Disease Prevention Objectives* both established national health objectives and served as the basis for the development of state and community plans. Like its predecessors, *Healthy People 2010* was developed through a broad consultation process, built on the best scientific knowledge and designed to measure programs over time. (See Technical Notes for the *HP2010* 21 Critical Health Objectives for Adolescents and Young Adults).

Massachusetts Comprehensive Assessment System (MCAS)

Implemented in 1998, the MCAS is the Commonwealth's statewide assessment program developed in response to the Education Reform Law of 1993. For more information on the MCAS, please visit the Massachusetts Department of Elementary and Secondary Education's website at <http://www.doe.mass.edu/mcas/>

State Agency Acronyms Used in *A Shared Vision*:

Board of Higher Education (BHE)

A Shared Vision for Massachusetts Youth and Young Adults, 2008
Glossary

Children's Trust Fund (CTF)
Department of Children and Families (formerly named the Department of Social Services [DSS])
Department of Elementary and Secondary Education (DESE) (formerly named the Department of Education [DOE])
Department of Employment and Training (DET)
Department of Labor and Workforce Development (DLWD)
Division of Insurance (DOI)
Executive Office of Health and Human Services (EOHHS) and Agencies:
EOPSS: Executive Office of Public Safety
Division of Medical Assistance (DMA)
Department of Mental Health (DMH)
Department of Developmental Services (DDS)
Department of Public Health (DPH)
Department of Youth Services (DYS)
Department of Transitional Assistance (DTA)
Health Care Finance and Policy (HCFP)
Mass Office of Refugees and Immigrants (MORI)

Technical Notes

HISTORY OF *A SHARED VISION*

In 1998, the Governor's Adolescent Health Council, composed of appointed community members and agency representatives undertook to examine the status of adolescent health in the Commonwealth. Since then, many people have contributed to the work of *A Shared Vision*. The initial proposal for a Massachusetts Adolescent Health Report was endorsed by the Governor Romney's Adolescent Health Council on June 16, 1998. In the fall of 1999, the Governor's Adolescent Health Council met with then Secretary of Health and Human Services, William O'Leary to discuss the proposal. The Adolescent Health Report Initiative Conference was held April 25, 2000 at the Crowne Plaza Hotel in Worcester. Speakers included Cathy Samples (Governor's Adolescent Health Council), Glenn Daly (Executive Office of Health and Human Services), Steven Ridini (The Medical Foundation), Paula Duncan, Susan Covitz (Consultant) and Larry Finison (The Medical Foundation).

In the summer of 2001 the Governor's Adolescent Health Council partnered with the Youth Development Advisory Council and the National Governor's Association Youth Policy Team to develop the "Shared Vision for Massachusetts Youth" and to use this framework for *A Shared Vision*. The Massachusetts Department of Public Health assumed responsibility for developing the report, which was released in 2003

In spring 2006, MDPH and the Governor's Adolescent Health Council began the process of revising and updating *A Shared Vision* using the most recent data. This document updates and replaces the previous version of *A Shared Vision*. *A Shared Vision* is intended to be a "living document" that will be regularly reviewed and updated to reflect current knowledge regarding youth development and health in the Commonwealth.

21 CRITICAL HEALTH OBJECTIVES FOR ADOLESCENTS AND YOUNG ADULTS

16-03. Reduce deaths of adolescents and young adults.

- a) 10-to14-year-olds
- b) 15-to 19-year-olds
- c) 20-to 24-year-olds

Unintentional Injury

15-15 a. Reduce deaths caused by motor vehicle crashes.

15- to 24-year-olds

26-01 a. Reduce deaths and injuries caused by alcohol- and drug-related motor vehicle crashes.

15- to 24-year-olds

15-19. Increase use of safety belts.

9th – 12th grade students

26-06. Reduce the proportion of adolescents who report that they rode, during the previous 30 days, with a driver who had been drinking alcohol.

9th – 12th grade students

Violence

- 15-32. Reduce homicides.
 - 10-to 14-year-olds
 - 15-to 19-year-olds
- 15-38. Reduce physical fighting among adolescents.
 - 9th – 12th grade students
- 15-39. Reduce weapon carrying by adolescents on school property.
 - 9th – 12th grade students

Substance Abuse and Mental Health

- 26-11. Reduce the proportion of persons engaging in binge drinking of alcoholic beverages.
 - 12- to 17-year-olds
- 26-10. Reduce past-month use of illicit substances (marijuana).
 - 12- to 17-year-olds
- 18-01. Reduce the suicide rate.
 - 10-to 14-year-olds
 - 15-to 19-year-olds
- 18-02. Reduce the rate of suicide attempts by adolescents that required medical attention.
 - 9th – 12th grade students
- 06-02. Reduce the proportion of children and adolescents with disabilities who are reported to be sad, unhappy, or depressed.
 - 4- to 17-year-olds
- 18-07. Increase the proportion of children with mental health problems who receive treatment.

Reproductive Health

- 09-07. Reduce pregnancies among adolescent females.
 - 15- to 17-year-olds
- 13-05. (Developmental) Reduce the number of new cases of HIV/AIDS diagnosed among adolescents and adults.
 - 13- to 24-year-olds
- 25-01. Reduce the proportion of adolescents and young adults with *Chlamydia trachomatis* infections.
 - 15- to 24-year-olds
 - Females attending family planning clinics
 - Females attending sexually transmitted disease clinics
 - Males attending sexually transmitted disease clinics
- 25-11. Increase the proportion of adolescents (9th-12th grade students) who:
 - Have never had sexual intercourse
 - If sexually experienced, are not currently sexually active
 - If currently sexually active, used a condom the last time they had sexual intercourse

Chronic Diseases

- 27-02 a. Reduce tobacco use by adolescents.
 - 9th – 12th grade students
- 19-03 b. Reduce the proportion of children and adolescents who are overweight or obese.
 - 12- to 19-year-olds
- 22-07. Increase the proportion of adolescents who engage in vigorous physical activity that promotes cardiorespiratory fitness 3 or more days per week for 20 or more minutes per occasion.
 - 9th – 12th grade students

MASSACHUSETTS CENSUS DEFINITIONS

Household

A household includes all the people who occupy a housing unit as their usual place of residence.

Householder

The person, or one of the people, in whose name the home is owned, being bought, or rented.

If there is no such person present, any household member 15 years old and over may serve as the householder for the purposes of the census.

Two types of householders are distinguished: a family householder and a non-family householder. A family householder is a householder living with one or more people related to him or her by birth, marriage, or adoption. The householder and all people in the household related to him are family members. A non-family householder is either one person living alone or two or more persons who share a dwelling, but do not constitute a family (e.g., a non-married couple with or without children).

Own Children

A child under 18 years old who is a son or daughter by birth, marriage (a stepchild), or adoption. For 100-percent tabulations, own children consist of all sons/daughters of householders who are under 18 years of age. For sample data, own children consist of sons/daughters of householders who are under 18 years of age and who have never been married, therefore, numbers of own children of householders may be different in these two tabulations.

Related children

Includes all people in a household under the age of 18, regardless of marital status, who are related to the householder. Does not include householder's spouse or foster children, regardless of age.

Other relative

Any household member related to the householder by birth, marriage, or adoption, but not specifically included in any other relationship category. May include grandchildren, parents, in-laws, cousins, or others.

Homelessness

The McKinney-Vento Education Assistance Act definition of “homeless youth” includes youth who lack “fixed, adequate, or regular housing.” This includes youth who:

- live in emergency or transitional homeless shelters with their parents, or whose families have doubled up with friends or relatives because of economic hardship or other reasons
- cannot, or choose not to, stay with their families in shelters
- are awaiting foster care
- are accompanied or not living in the physical custody of their parents/guardians, including “runaway” or “throwaway” youth

- have no known shelter and are living in parks, empty buildings, or cars, or are moving from one friend's place to another's or staying with relatives

In 2005, for the first time anywhere in the country, the Massachusetts YRBS asked the following question regarding a student's housing status:

What is your primary nighttime residence? (In other words, where do you typically sleep at night?)

- At home with my parents/guardians
- At a friend's or relative's house with my parents/guardians
- At a friend's or relative's house without my parents/guardians
- In a supervised shelter with my parents/guardians
- In a supervised shelter without my parents/guardians
- In a hotel/motel, car, park, campground, or other public place with my parents/guardians
- In a hotel/motel, car, park, campground, or other public place without my parent/guardians
- Other

Anyone who selected "b" through "h" was considered homeless.

OVERWEIGHT AND OBESITY/ BODY MASS INDEX

The CDC and Surgeon General have used Body Mass Index (BMI) as a measurement of these conditions. An expert panel, convened by the NIH in 1998, utilized BMI to define overweight and obese. Since then, BMI has become the standard for diagnosing the two conditions. The BMI has some limitations in that it can over-estimate body fat in people who are very muscular as well as under-estimate body fat in people who have lost muscle mass, such as the elderly. BMI for adult body mass (21 years of age and over) is calculated as follows:

ADULT BMI:

$$\text{BMI} = \frac{\text{Weight (pounds)}}{\text{Height (inches)}^2} \times 703$$

A BMI ≥ 30 indicates obesity in adults.

A BMI between 25 - 29.9 indicates overweight in adults.

The BMI calculation for adults differs among children and adolescents aged 2–20 years.

"In children and adolescents, overweight has been defined as a sex-and-age-specific BMI at or above the 95th percentile, based on the revised Centers for Disease Control and Prevention (CDC) growth charts...and they plot the BMI-for-age according to sex-specific charts. Neither a separate definition for obesity nor a definition for overweight based on health outcomes or risk factors is defined for children and adolescents." - U.S. Department of Health and Human Services, 2001; p. 6.

How to Interpret BMI for Age in Children and Adolescents

The extremes in BMI-for-age that raise concern in children aged 2–20 years:

- Underweight: BMI-for-age <5th percentile

- At risk of overweight: BMI-for-age 85–<95th percentile
- Overweight: BMI-for-age \geq 95th percentile
(<http://www.cdc.gov/nccdphp/dnpa/bmi/bmi-for-age.htm>)

What are the advantages of using BMI-for-age with children from 2 to 20 years?

- BMI-for-age can be used for adolescents beyond puberty.
- BMI in children and adolescents compares well to laboratory measures of body fat.
- BMI is related to health risks.
- Sixty percent of children and teens with a BMI-for-age above the 95th percentile have at least one risk factor while 20% have two or more risk factors for cardiovascular disease.
- Overweight children are likely to become overweight adults.
- The standards used to identify obesity and overweight in children and adolescents agree with standards used to identify overweight and obesity in adults.

DEFINITIONS OF SPECIAL HEALTH CARE NEEDS AND DISABILITY

The National Survey of Children with Special Health Care Needs (NS-CSHCN): See DATA SOURCES section for a brief overview of the NS-CSHCN. Children with special health care needs are defined by HRSA’s MCHB as, “...those who have or are at increased risk for a chronic physical, developmental, behavioral, or emotional condition and who also require health and related services of a type or amount beyond that required by children generally” (McPherson, 1998). The screener questions used by NS-CSHCN to identify CSHCN are listed in the following table. All 3 parts of at least one screener question – or, in the case of question 5, the 2 parts – must be answered “Yes” in order for a child to meet the CSHCN screener criteria for having a special health care need. (Bethell, 2002).

1. Does your child currently need or use <u>medicine prescribed by a doctor</u> (other than vitamins)?
Yes-> Go to question 1a
No -> Go to question 2
1a. Is this because of ANY medical, behavioral, or other health condition?
Yes-> Go to question 1b
No -> Go to question 2
1b. Is this a condition that has lasted or is expected to last for <u>at least</u> 12 months? (Yes/No)
2. Does your child need or use more <u>medical care, mental health, or educational services</u> than is usual for most children of the same age?
Yes-> Go to question 2a
No -> Go to question 3

2a. Is this because of ANY medical, behavioral, or other health condition?
Yes-> Go to question 2b
No -> Go to question 3
2b. Is this a condition that has lasted or is expected to last for <u>at least</u> 12 months? (Yes/No)
3. Is your child <u>limited or prevented</u> in any way in his or her ability to do the things most children of the same age can do?
Yes-> Go to question 3a
No -> Go to question 4
3a. Is this because of ANY medical, behavioral, or other health condition?
Yes-> Go to question 3b
No -> Go to question 4
3b. Is this a condition that has lasted or is expected to last for <u>at least</u> 12 months? (Yes/No)
4. Does your child need or receive <u>special therapy</u> , such as physical, occupational, or speech therapy?
Yes-> Go to question 4a
No -> Go to question 5
4a. Is this because of ANY medical, behavioral, or other health condition?
Yes-> Go to question 4b
No -> Go to question 5
4b. Is this a condition that has lasted or is expected to last for <u>at least</u> 12 months? (Yes/No)
5. Does your child have any kind of emotional, developmental or behavioral problem for which he or she needs or receives <u>treatment or counseling</u> ?
Yes-> Go to question 5a
No
5a. Has this problem lasted or is it expected to last for <u>at least</u> 12 months? (Yes/No)

Source: Bethell et al, 2002.

The Massachusetts Youth Health Survey (MYHS): See DATA SOURCES section for a brief overview of the MYHS. The screener questions used in the MYHS to identify youth with disabilities in Massachusetts were developed by the Seattle Quality of Life Group and are listed in the following table (Seattle Quality of Life Group, 1997). Students who answered “Yes” to one or more of the screener questions were classified as having a disability.

Do you have any physical disabilities or long-term health problems?
Do you have any long-term emotional problems or learning disabilities?
Would other people consider you to have ANY disabilities or long-term health problems, including physical health, emotional, or learning problems?
Are you limited in any activities because of ANY disabilities or long term health problems, including physical health, emotional, or learning problems?

Source: Seattle Quality of Life Group, 1997.

The Massachusetts Behavior Risk Factor Surveillance System (BRFSS): See DATA SOURCES section for a brief overview of the MBRFSS. The screener questions used in the MBRFSS to identify adults with disabilities in Massachusetts are listed in the following table. MBRFSS survey participants who responded positively to any of the four screener questions and reported having the disability or health problem for a year or more were considered to have a disability.

Are you limited in any way in any activities because of physical, mental, or emotional problems?
Do you now have any health problem that requires you to use special equipment, such as a cane, a wheelchair, a special bed, or a special telephone?
Because of any impairment or health problem, do you have any trouble learning, remembering, or concentrating?
A disability can be physical, mental, emotional, or communication-related. Would you describe yourself as having a disability of any kind?

EDUCATIONAL OPPORTUNITY DEFINITIONS

The term “academic graduates” refers to students graduating from any academic high school or a comprehensive high school, and may include graduates of vocational programs within comprehensive schools.

The term “vocational graduates” refers to students graduating from any vocational or agricultural school, and does not indicate whether the student completed a Chapter 74 vocational program.

MASSACHUSETTS COMPREHENSIVE ASSESSMENT SYSTEM MCAS DEFINITIONS

For the purpose of computing school, district, and state results, students who were absent from any subject area MCAS test without a medically-documented excuse were assigned the minimum scaled score of 200 and a performance level of Failing for that subject area. These results include regular education students, students with disabilities and limited English proficient students.

Students in the Class of 2003 were the first class in Massachusetts required to earn a competency determination as well as meet local requirements in order to graduate from high school. To earn a competency determination students must pass both the grade 10 MCAS English Language Arts and Mathematics tests by earning a score of Needs Improvement or above. Massachusetts Board of Education policy allows students five total opportunities to take the exams including the initial test in tenth grade and two re-take opportunities each in eleventh and twelfth grade. Students will have a total of 5 testing opportunities before their scheduled graduation date, but will continue to be able to take the test after they leave high school, if necessary.

ADVANCED

Students at this level demonstrate a comprehensive and in-depth understanding of rigorous subject matter, and provide sophisticated solutions to complex problems.

PROFICIENT

Students at this level demonstrate a solid understanding of challenging subject matter and solve a wide variety of problems.

NEEDS IMPROVEMENT

Students at this level demonstrate a partial understanding of subject matter and solve some simple problems.

FAILING

Students at this level demonstrate a minimal understanding of subject matter and do not solve simple problems.

DROPOUT RATES:

Dropout is defined as a student in grade nine through twelve who leaves school prior to graduation for reasons other than a transfer to another school and does not re-enroll before the following October 1. The dropout rate is the number of students who drop out over a one-year period minus the number of returned dropouts, divided by the October 1 enrollment.

SEXUAL ASSAULT AND DATING VIOLENCE

Sexual assault and dating violence are crosscutting issues, and could be located in several places in *A Shared Vision*. To avoid redundancy, we have placed sexual assault in *Goal 3*, which address safety, and dating violence in *Goal 2*, which addresses relationships.

Data Sources

Annie E. Casey Foundation, KIDS COUNT

KIDS COUNT, a project of the Annie E. Casey Foundation, is a national and state-by-state effort to track the status of children in the U.S. By providing policymakers and citizens with benchmarks of child well-being, KIDS COUNT seeks to enrich local, state, and national discussions concerning ways to secure better futures for all children.

BRFSS

The Massachusetts Behavioral Risk Factor Surveillance System (BRFSS) is a random digit-dial telephone survey of Massachusetts adults 18 and older. In 1999, 7,287 adults participated. All data are weighted, and provide population-based estimate of health among Massachusetts adults. *A Shared Vision* included information from the sub-sample of the 18 to 24 year olds. For more information contact:

MassCHIP

The Massachusetts Community Health Information Profile (MassCHIP) is a dynamic, user-friendly information service provided by the Massachusetts Department of Public Health that provides free, online access to these and many other health and social indicators. MassCHIP provides community-level data to assess health needs, monitor health status indicators, and evaluate health programs.

Massachusetts Youth Health Survey (MYHS)

The Massachusetts Youth Health Survey (MYHS) is a comprehensive health survey administered to a random selection of students attending Massachusetts public middle and high schools. MYHS measures the prevalence of physical and mental health conditions, including chronic disease and disability; risky behaviors that contribute to the leading causes of morbidity and mortality in youth; and “protective” or “resiliency” factors. The results are representative of middle and high school students in Massachusetts public schools. In 2007, The Massachusetts Departments of Public Health and Education developed a coordinated system to implement and report on the two youth surveys – MYHS and MYRBS.

Massachusetts Youth Risk Behavior Survey (MYRBS)

The Massachusetts Department of Elementary and Secondary Education in collaboration with the Centers for Disease Control and Prevention (CDC) conducts the Youth Risk Behavior Survey (YRBSS) in randomly selected public high schools every other year. It focuses on the major risk behaviors that threaten the health and safety of young people. This anonymous survey includes questions about tobacco use; alcohol and other drug use; sexual behavior that might lead to unintended pregnancy or sexually transmitted disease; dietary behavior; physical activity; and behaviors associated with intentional or unintentional injury. Data from the YRBSS is important

for planning health education and prevention programs. For more information, see technical notes or contact Dr. Carol Goodenow at the Massachusetts Department of Elementary and Secondary Education, (cgoodenow@doe.mass.edu.)

MISER

The Massachusetts Institute for Social and Economic Research (MISER) was founded in 1981 by the University of Massachusetts. MISER is an interdisciplinary research institute of the College of Social and Behavioral Sciences. It provides a variety of services to the University, the Commonwealth, and to national and international audiences. MISER's research involves planning, strategy, and forecasting, with a focus on social, economic, and demographic issues.

National Survey of Children with Special Health Care Needs (NS-CSHCN)

The National Survey of Children with Special Health Care Needs (NS-CSHCN) is sponsored by the Maternal and Child Health Bureau (MCHB) of the Health Resources and Services Administration (HRSA) and is carried out by the Centers for Disease Control and Prevention's National Center for Health Statistics. NS-CSHCN, a parent-report survey, provides detailed information on the prevalence of children with special health care needs (CSHCN) in the Nation and in each State, the demographic characteristics of these children, the types of health and support services they and their families need, and their access to and satisfaction with the care they receive.

US Census

Every 10 years the US Census Bureau conducts a complete enumeration, usually of a population, but also of businesses and commercial establishments, farms, governments, and so forth. The last census was conducted in 2000. www.census.gov.

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Appendix A: Unmet Data Needs

The following data are not currently collected. The availability of these data, many of which reflect the asset-based approach of the Shared Vision framework, would enhance our understanding of youth well being in Massachusetts.

INTRODUCTION: WHO ARE THE YOUTH AND YOUNG ADULTS OF MASSACHUSETTS

- Demographics of youth refugee and immigrant populations
- Specific food insecurity estimates for Massachusetts communities and populations that are most at-risk.

GOAL 1: PHYSICAL AND MENTAL HEALTH

- The average amount of physical activity per week
- The number of hours of school-based physical education
- Inventory of goods available in school vending machines
- The a la carte and competitive foods served in school cafeterias
- Percent of youth with positive self-esteem
- Percent of youth who have sense of purpose/feel their life has a purpose
- Percent of youth who are optimistic about their personal future

GOAL 2: RELATIONSHIPS

- Percent of youth who feel they have caring neighbors
- Percent of youth who feel they have caring extended families
- Percent of youth who feel they have caring schools
- Percent of youth whose family has clear boundaries—rules, consequences and monitoring of where youth goes
- Percent of youth who have positive peer influence—close friends who model responsible behaviors
- Percent of youth who feel parents and teachers, other adults in their lives have high expectations for them

GOAL 4: EDUCATIONAL AND ECONOMIC OPPORTUNITY

- Percent of youth who participate in programs with life-skills training
- Library utilization
- Park space/recreation opportunities

- Percent of youth with parent(s) who are actively involved in helping them succeed in school
- Percent of youth who spend time engaging in creative activities
- Percent of youth motivated to do well in school
- Percent of youth who care about their school
- Percent of youth with/or gaining multicultural understanding

GOAL 5: OPPORTUNITY FOR COMMUNITY SERVICES AND CIVIC ENGAGEMENT

- Percentage of youth involved in programs and percentage who participate in program planning and implementation
- Percentage of youth programs that address issues for gay, lesbian, and bisexual youth
- Percentage of youth programs that address cultural competency
- Percentage of youth who put high value on helping others
- Percentage of youth with disabilities and chronic conditions involved in youth programs

Appendix B: Resources

Building Partnerships for Youth

<http://cals-cf.calsnet.arizona.edu/fcs/bpy/>

Academy for Educational Development (AED)

Center for Youth Development and Policy Research

<http://cydpr.aed.org/>

Search Institute

<http://www.search-institute.org/>

America's Promise Alliance

<http://www.americaspromise.org/>

GOVERNMENT

Centers for Disease Control and Prevention

National Center for Chronic Disease Prevention and Health Promotion

Division of Adolescent and School Health

<http://www.cdc.gov/HealthyYouth/index.htm>

Massachusetts Department of Elementary and Secondary Education

(781) 338-3000

<http://www.doe.mass.edu/>

MassHealth

(800) 841-2900

<http://www.mass.gov/masshealth/>

Massachusetts Department of Mental Health

<http://www.mass.gov/dmh>

Massachusetts Department of Developmental Services (Formerly the Department of Mental Retardation)

<http://www.mass.gov/dmr>

Massachusetts Office on Disability

<http://www.mass.gov/mod/>

Massachusetts Department of Public Health

(617) 624-6000

<http://www.mass.gov/dph/>

Massachusetts Department of Children and Families
(617) 748-2000
<http://www.mass.gov/dss/>

Massachusetts Department of Transitional Assistance
(617) 348-8500
<http://www.mass.gov/dta/>

Massachusetts Department of Youth Services
(617) 727-7575
<http://www.mass.gov/dys/>

U.S. Department of Education
21st Century Community Learning Centers
<http://www.ed.gov/21stcccl/>

U.S. Health and Human Services
Administration for Children and Families
Family and Youth Services Bureau
National Clearinghouse on Families and Youth
(301) 608-8098
<http://www.ncfy.com/>

U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation
http://aspe.os.dhhs.gov/_/index.cfm

ASSOCIATIONS, ORGANIZATIONS, FOUNDATIONS, CENTERS

Advocates for Youth
(202) 419-3420
<http://www.advocatesforyouth.org/>

AIDS Action Committee of Massachusetts
(617) 437-6200
<http://www.aac.org/>

American Academy of Pediatrics
(847) 434-4000
www.aap.org

American Psychological Association
(800) 374-2721
www.apa.org

American Youth Policy Forum

(202) 775-9731
<http://www.aypf.org/>

Annie E. Casey Foundation
(410) 547-6600
<http://www.aecf.org/>

At The Table
<http://www.AttheTable.org/>

Boston Leadership Education in Adolescent Health
<http://www.bostonleah.org/>

Boys and Girls Clubs of America
<http://www.bgca.org/>

Boy Scouts of America (Boston Minuteman Council)
(617) 615-0004
http://www.bsaboston.org/openrosters/view_homepage.asp?orgkey=909

Carnegie Corporation
(212) 371-3200
<http://www.carnegie.org/>

Center for Young Women's Health, Children's Hospital Boston
(617) 355-2994
www.youngwomenshealth.org/

Child Trends
(202) 572-6000
<http://www.childtrends.org/>

Child Welfare League of America
(703) 412-2400
<http://www.cwla.org/>

Children's Defense Fund
(800) 233-1200
www.childrensdefensefund.org

Children's Hospital Boston
(617) 355-6000
www.childrenshospital.org/

Commonwealth Corporation Youth Programs
(617) 727-8158
<http://www.commcorp.org/youth/index.html>

The Forum for Youth Investment
(202) 207-3333
<http://www.forumforyouthinvestment.org/>

Girls Incorporated
(212) 509-2000
www.girlsinc.org

Girl Scouts
www.girlscouts.org

Kids Health
www.kidshealth.org

Massachusetts Alliance on Teen Pregnancy
(617) 482-9122
<http://www.massteenpregnancy.org/>

Massachusetts 4-H
<http://www.mass4h.org/>

Massachusetts Institute for Social and Economic Research (MISER)
<http://www.umass.edu/miser/>

Massachusetts Interscholastic Athletic Association
(508) 541-7997
<http://www.miaa.net/>

Massachusetts Mentoring Partnership
(617) 695-1200
<http://www.massmentors.org/>

National Adolescent Health Information Center
(415) 502-4856
<http://nahic.ucsf.edu/>

National Human Services Assembly
(202) 347-2080
<http://www.nassembly.org/nassembly/>

National Institute on Out-Of-School Time
Wellesley Centers for Women
(781) 283-2547
<http://www.niost.org/>

National Network for Youth
(202) 783-7949
<http://www.nn4youth.org/>

National Youth Advocacy Coalition
(800) 541-6922
<http://www.nyacyouth.org/>

National Youth Development Information Center
National Collaboration for Youth
(202) 347-2080
<http://www.nydic.org/>

National Youth Leadership Council
(651) 631-3672
<http://www.nylc.org/>

Parents, Families, and Friends of Lesbians and Gays (PFLAG)
(202) 467-8180
<http://www.pflag.org/>

Communities That Care
<http://ncadi.samhsa.gov/features/ctc/resources.aspx>

Tufts Medical Center
(617) 636-5000
<http://www.tuftsmedicalcenter.org/>

Sexuality Information and Education Council of the United States (SIECUS)
(212) 819-9770 (NYC Office)
(202) 265-2405 (DC Office)
<http://www.siecus.org/>

Young Men's Health, Children's Hospital Boston
www.youngmenshealthsite.org/

Youth Leadership Institute
(415) 836-9160
<http://www.yli.org/>

Youth Service America
<http://www.ysa.org/>